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ABSTRACT

This guide, one of a series of publications written for medical school faculty to use in designing substance abuse instruction, focuses on curriculum content for drug and alcohol abuse instruction. Following a brief introduction, discussions of positive attitude development toward substance abuse patients, and the psychological, cultural, and biological aspects of substance abuse are presented. Diagnostic techniques, patient referral and early intervention therapeutic treatment techniques, especially with adolescents, are also discussed. Treatment of acute and chronic phases of alcohol and drug abuse, and therapy goals and techniques are explored. Substance abuse among physicians is presented in terms of early symptoms, problems in delayed treatment, and successful treatment; and substance induced organic mental disorders are discussed. A section on community prevention of substance abuse focuses on primary (legal and educational approaches), secondary (medical and legal approaches), and tertiary prevention. The guide concludes with a list of references, appendices, and tables dealing with diagnostic instruments and drug signs and symptoms, and an annotated list of curriculum materials. (BL)

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Alcohol and Drug Abuse Curriculum Guide for Psychiatry Faculty

MEDICINE 2

Donald S. Gallant, M.D.

Health Professions Education Curriculum Resource Series

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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Foreword

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the National Institute on Drug Abuse (NIDA) recognize the vital role of the physician in the diagnosis, treatment, and referral of patients with substance abuse disorders. Physician education in alcohol and drug abuse is of critical importance in our efforts to combat these major medical problems.

In order to support medical school faculty in their efforts to make substance abuse education an integrated, effective part of the curriculum, the Health Professions Education (HPE) Project was initiated by the Training Branch of NIAAA, in cooperation with NIDA. In response to the critical need for useful information in alcohol and drug abuse instruction, the HPE Project conducts a two-part effort to collect existing educational resources and make them available to health professions educators through the National Clearinghouse for Alcohol Information (NCALI) data base and to develop curriculum materials of specific use to medical educators in instructional planning.

This volume is one of a series of publications for use in designing substance abuse instruction and is offered to the medical education community in the hope that it will be a valuable resource in preparing physicians to treat alcohol and drug abuse disorders.

LORAN ARCHER, *Acting Director,*
National Institute on Alcohol
Abuse and Alcoholism

Contents

	Page
Foreword	iii
Introduction	1
Chapter 1. Developing Positive Attitudes Toward Substance Abuse Patients	3
Chapter 2. Psychologic, Cultural, and Biologic Aspects of Substance Abuse	5
Psychodynamic Mechanisms and Personality Problems Contributing to the Development of Alcohol and Drug Abuse	5
Psychologic Consequences of Substance Abuse	7
Variations and Effects of Cultural Attitudes	9
Genetic Aspects of Alcohol and Drug Abuse	10
Chapter 3. Early Diagnosis of Alcohol and Drug Abuse and Indications for Patient Referral	13
Diagnosing the Early Phases of Alcohol and Drug Abuse	13
The Interview Process	13
Early Symptoms and Signs of Alcohol and Drug Abuse	14
Indications for Referral for Psychiatric Consultation or to Specialized Treatment Programs	16
Chapter 4. Essential Elements of the Therapeutic Relationship and Techniques of Early Intervention and Treatment: Special Techniques With Adolescents	19
Essential Elements of the Therapeutic Relationship	19
Techniques of Early Intervention and Treatment	19
Special Intervention Modification With Adolescents	21
Chapter 5. Treatment of Acute and Chronic Phases of Alcohol and Drug Abuse	23
Treatment of the Acute Phase of Substance Abuse	23
Alcohol or Drug Intoxication	23
Idiosyncratic Drug Reactions	24
Alcohol and Drug Withdrawal	25

Page

Treatment of the Chronic Phase of Alcohol and Drug Abuse 27

Use of Community Resources (AA, Al-Anon, NA) 27
Special Problems of Female, Minority Group, and Elderly Substance Abusers 28
Use of Disulfiram 29
The Goals of Controlled Drinking 29

Goals of Therapy 30

Problems in Evaluating Success Rates of Substance Abuse Programs 30

Teaching Treatment Techniques: Use of Recovered Patients 31

Recovery Panels 31
Self-help Groups 31
Student Participation in Treatment Settings 31

Chapter 6. Intervention and Treatment of the Physician Disabled by Substance Abuse 33

Early Symptoms of Substance Abuse Among Physicians 33

The Problem of Delayed Treatment of the Addicted Physician 34

Successful Treatment of the Physician With Substance Abuse 35

Chapter 7. Diagnosis and Treatment of Substance-Induced Organic Mental Disorders 37

Diagnosis of Substance-Induced Organic Disorders 37

Dementia Associated with Alcoholism and Other Drugs 38

Treatment of the Organic Disorders 38

Chapter 8. Prevention of Substance Abuse Within a Community 41

Primary Prevention 41

Legal Approaches 41
Educational Approaches 42

Secondary Prevention 43

Medical Aspects 43
Legal Aspects 44

Tertiary Prevention 44

Page

References 45

Appendices and Tables 50

Appendix A: Hazards of the Health Profession 50

Appendix B–1: Diagnostic Questions for Early or Advanced Alcoholism 51

Appendix B–2: Michigan Alcohol Screening Test (MAST) 53

Appendix C: A Technique for Intervention and Confrontation of Substance Abusers 55

Appendix D: Tables 57

Table 1. Checklist: A Summary of the Interview Behavior 57

Table 2. Cutaneous Signs of Alcohol and Drug Abuse 58

Table 3. Stimulant Intoxication and Overdose 59

Table 4. Stimulant Withdrawal 60

Table 5. Hallucinogen Intoxication 61

Table 6. Phencyclidine (PCP, Angeldust) Intoxication and Overdose 62

Table 7. Hypnosedative Intoxication and Overdose 63

Table 8. Hypnosedative Withdrawal 64

Table 9. Opiate Intoxication and Overdose 65

Table 10. Opiate Withdrawal 66

Table 11. Drug Signs and Symptoms 67

Annotated List of Curriculum Material 71

Introduction

The major goal of this monograph is to provide a guide for psychiatric faculty in teaching the subject of substance abuse (alcohol and other drugs of misuse) to medical students. This guide explains and summarizes the core material that the author and reviewers consider to be most important for the student to learn and contains a list of curriculum materials and a selected bibliography with explanations for the selection of these materials.

As with every guide, the subject to be taught should first be defined. Unfortunately, we are at somewhat of a disadvantage with the subject of substance abuse or Substance Use Disorder. The definition of Substance Use Disorder, as classified in a separate category in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM–III) (American Psychiatric Association 1980), lists numerous criteria but does not specify the minimum number required for diagnosis. Therefore, while the following definition of Substance Use Disorder will not be acceptable to all psychiatrists and other physicians, it does contain essential features of the criteria listed for the diagnosis in DSM III. Thus, a patient is said to have a Substance Use Disorder if the use of the chemical pertains to any one of the five following major areas: (1) interfering with employment or performance as a student, (2) creating problems in the family, (3) causing difficulties or having a significant effect on relationships with friends, (4) causing legal problems, such as driving while intoxicated (DWI) or traffic accidents, or (5) resulting in medical problems, such as alcohol gastritis.

Before we consider the subject material that should be regarded as the core of knowledge to be taught by the psychiatric faculty, it must be emphasized that available patient populations with Substance Use Disorders are essential for the adequate teaching of this subject. Without the help of "live" patient presentations (in a few cases, audiovisual tapes may compensate for the unavailability of a patient for a specific subject), it would probably be impossible to achieve the teaching objectives. It is important to introduce successfully treated substance abuse patients to the students *early* during the course of their medical school careers. Most faculty members are familiar with the negative pictures that substance abuse patients present to medical students in the emergency room and medical wards of large general hospitals. These patients are either temporary treatment failures or have never sought help. With this exposure, the medical student frequently develops a pessimistic and a negative attitude toward this patient population unless impressive treatment successes are introduced as teaching cases during the initial part of his or her training. Most of the recovered successful patients are only too happy to participate in this teaching exercise with students *if they are asked to do so*. Organizations such as Alcoholics Anonymous (AA), Al-Anon, and Narcotics Anonymous (NA) can be extremely helpful in enabling the psychiatric faculty to find successful patients for participation in the teaching exercises.

It should be noted that the author of this monograph believes that physicians in clinical practice should be capable of both diagnosing and treating the great majority of substance abusers without having to refer them to psychiatrists. Keeping this opinion in mind, the core material for the psychiatric teaching of substance abuse to the medical students may be divided into eight specific objectives:

1. To teach the medical student to empathize with and offer an optimistic expectation of treatment success when attempting to help the patient with substance abuse.
2. To be able to identify the *major* types of psychodynamic mechanisms and the psychologic symptoms that may subsequently lead to substance abuse as well as the psychologic consequences of substance

abuse; variations and effects of cultural attitudes as well as genetic aspects will be presented as part of this objective.

3. To be able to diagnose the early phases of substance abuse; to be able to decide which patients require referral for psychiatric therapy or to specialized rehabilitation programs.
4. To define the essential elements of the therapeutic relationship and to learn the techniques of *early* intervention and treatment.
5. To be able to use a variety of treatment techniques for the acute and chronic phases of alcohol and drug abuse including essential community resources such as AA, Al-Anon, and NA, as well as the medical management (including counseling, use of disulfiram, etc.) that will help the substance-abusing patient to become abstinent and improve the quality of his or her life; to feel comfortable using the team approach with staff of other disciplines and lay personnel and to be able to deal effectively with special minority group problems.
6. To be able to aid in the intervention and treatment of the physician disabled by alcohol or drug abuse.
7. To be able to diagnose and treat substance-induced organic mental disorders.
8. To learn about different methods of prevention in relation to the spread of substance abuse within a community; to be able to sort out the genetic, sociologic, economic, and legal factors that may increase the incidence of substance abuse.

Chapter 1
Developing Positive Attitudes Toward Substance Abuse Patients

Since many medical students have already developed a prejudiced picture of the substance-abusing patient even before entering medical school, it is essential to address this attitude during the initial teaching of this subject. If student attitudes are not faced at the outset, then the subsequent teaching of both objective and subjective material on substance abuse will have much less impact on them. Even if the learning process were not inhibited by a negative attitude, the treatment of a patient upon whom the student looks with disfavor would be impaired. Therefore, first, it is essential to teach the student to consider the medical importance of substance abuse as well as how to empathize with and offer an optimistic expectation of therapeutic success in treating this patient. Psychiatric faculty should have the responsibility and opportunity to accomplish this goal during the first year of medical school training.

At Tulane University School of Medicine, the subject of Substance Use Disorder is introduced in the freshman year in a course titled Human Behavior. (At other medical schools, this course may be called Behavioral Science or Psychologic Aspects of Medicine.) The main teaching modalities include the use of article presentations *by students* in small discussion groups of 8 to 10, a "live" interview with outpatients involved in married couples therapy, presentations with members of AA, Al-Anon, and NA, and audiovisual tapes of an interview with former substance-abusing physicians and their spouses.

The importance of the subject of Substance Use Disorder in hospital practice is emphasized by the students' presentations of articles reporting the very high rate of alcoholism in hospital walk-in clinics (28 percent), emergency rooms (38 percent), and general hospital ward patients (32 percent in male and 8 percent in female patients) (Zimberg 1979; Barcha et al. 1968). For private outpatient settings, the survey of family practitioners by Werkman and his colleagues (1976) is used to demonstrate that alcoholism is not only among the three most common psychiatric problems encountered in medical practice (marital problems and depression are slightly more frequent) but also the most difficult to treat. Next to the subject of marital counseling, the physicians desired more information on alcohol and drug use.

While stressing the importance and frequency of substance abuse in future patient contacts, the presentations also emphasize the warning signals as well as the frequency of these problems *among physicians* themselves. A handout listing the possible predictor symptoms for later development of substance abuse (see appendix A), modified from a *Medical World News* report (1979), is used for discussion of the impaired physician.

For self-analysis of the medical students' attitudes toward substance abuse, three survey papers are introduced at the small group discussions (Fisher et al. 1975; Chappel and Schnoll 1977; Mendelson et al. 1964). These surveys show that, as freshman students advance in medical school, they develop increasingly negative attitudes toward alcoholics. This negative attitude worsens as the students graduate and become members of house staffs. Without adequate preparation and training in the field of substance abuse, the majority of medical students are likely to have mainly negative experiences with substance abusers. It is the chronic treatment failure who repeatedly returns to the emergency room and walk-in clinic at the general hospital where the students spend most of their clinical time. In these surroundings, it is quite unusual to see a successful treatment case. As a result, the student may not only develop a distasteful attitude toward substance abusers, but also acquire a very pessimistic opinion about the prognosis. Presentation of these papers and open discussion about

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attitudes should therefore be initiated at the start of this course.

The likelihood of negative experiences with the substance abuser in the general hospital makes it essential that *outpatients* who are treatment successes be introduced to the students during the freshman year. These outpatient contacts are found to be much more positive experiences than inpatient contacts and are preferred by a significantly greater number of medical students, even in other areas of psychiatry (Eagle and Marcos 1980). Local substance abuse clinic facilities as well as AA, Al-Anon, and NA cooperate by providing many recovered substance abusers to participate in teaching demonstrations. We have been continually amazed at the extremely positive responses of these community facilities and the patients. There is a reciprocal, beneficial relationship that results from an open history presentation in front of the patient and any family members who are available. As the students learn from active participation during the process of asking questions, the patients appreciate the obvious attention and concern devoted to them. This learning process with its personal exchange between student and patient helps the student to develop a more sensitive approach to the patient and his or her feelings. The presence of a patient helps to humanize the subject of substance abuse (Linfors and Neelon 1980).

If a spouse of the substance abuser is available for the presentation, it may be an even more meaningful experience for the students. Listening to a wife or husband explain that the children are no longer tense or resentful and that warmth now exists where previously there had been only rebellious or sullen anger can have a dramatic impact on the students. This type of outpatient learning experience gives the student a more positive and optimistic attitude toward substance abusers.

If possible, faculty members from other departments should also be invited to these sessions. It has been our experience that teachers in other specialties will also have an influence, for better or for worse, on student attitudes toward patients with problems of alcohol or drug abuse. We have found it useful to collaborate with other departments within the medical school in presenting psychiatric or clinical aspects of topics within their curriculum that are related to substance abuse.

In addition to "live" patient presentations, a 52-minute audiovisual tape entitled "Alcohol and Drug Abuse Among Physicians" is presented to the entire freshman class, which then divides into small groups for an additional hour to discuss the film (see Annotated List of Curriculum Material). The film consists of an interview with two physicians and their wives that was conducted before a previous freshman medical student class. The physicians, both successfully treated for substance abuse, permitted the use of their last names in the film, allowing a very courageous, honest exposure of their past problems with drug and alcohol abuse. The many questions from the students are answered candidly by the two physicians and their wives. This film not only serves to convey an optimistic attitude toward recovery, but also helps the freshman student to identify more closely with the patient, learning that anyone, even someone like himself or herself, can become a substance abuser.

These objectives are not only worthwhile but attainable; it has been shown that attitude change in medical students is a reasonable goal and that positive changes can be sustained over a prolonged period of time (Miller et al. 1980).

Chapter 2
Psychologic, Cultural, and Biologic Aspects of Substance Abuse

Having devoted the initial effort in teaching substance abuse to the attitudinal orientation of the student, it is then appropriate for the teacher to turn to the didactic aspects of this subject. The four primary goals that should be addressed in this section are:

1. To identify the major types of psychodynamic mechanisms and the personality problems that may subsequently lead to alcohol and drug abuse.
2. To describe the psychologic consequences of substance abuse.
3. To explain the effects of cultural attitudes upon the development of substance abuse.
4. To point out the potential importance of genetic susceptibility.

These goals should be introduced during this part of the course in order to provide a balanced representation of the intrapsychic, interpersonal, cultural, and genetic forces that can result in a substance use problem. Ideally, this section on etiologies should be taught during the sophomore year or no later than the junior year. Unlike the attitudinal material in chapter 1, the material in this section can be presented before large groups of students; in many medical schools, the sophomore year provides the opportunity to have large groups of students available at one time.

Psychodynamic Mechanisms and Personality Problems Contributing to the Development of Alcohol and Drug Abuse

There is no single psychodynamic formulation or specific type of personality disorder that can explain the development of all substance use disorders (Westermeyer 1976*a*; Knox 1978). However, in most of the cases, the *denial mechanism* plays a major role. An adequate explanation of this psychologic mechanism of self-deception may serve to decrease some of the students' future frustrations in dealing with substance abusers. The use of analogies can be helpful in illustrating the denial mechanism; for example, comparing the patient with a pathologic denial mechanism to a race horse with blinders on to decrease the noise and excitement of both the other horses and the crowd in order to concentrate on the one goal of crossing the finish line first. In the case of the person with a drinking problem, the denial mechanism represents the patient's blinders, which serve to ward off any insights that may interfere with the major goal of going on to the next drink. Minimizing the seriousness of the drinking problem becomes an essential part of the patient's orientation to the environment.

One fascinating aspect of the denial mechanism is highlighted by a research survey on cigarette smoking (Kozlowski 1980). While 63 percent of highly motivated cardiac patients in one study reported that they no longer smoked up to 18 months after their last heart attack, urine assays showed that one-fifth of these patients were still smoking. In this situation, the denial apparently changes to a conscious, embarrassing distortion in order to avoid a negative response from the clinician. A similar study was performed in alcoholics

whose urine was assayed for alcohol while they were visiting a medical clinic; 52 percent of their reports on drinking were unreliable (Orrego et al. 1979). These patients, who did not realize that their urines were being evaluated for alcohol, denied any alcohol intake during the preceding 24 hours. Instructing the student on how to approach the denial mechanism in a sensitive manner while taking an adequate history will be described in some detail in the next section.

The learning theory of chemical dependency, with anxiety leading to drug use and a subsequent reduction in anxiety, is another concept that should be presented as part of this section. The relief of anxiety (and subsequent positive reinforcement) by alcohol or injectable narcotics may be immediate, as contrasted with other adaptive techniques for relieving anxiety, and repetitive practice can result in overlearning this habit. This conditioned response is maladaptive and may result in negative, anxiety-perpetuating responses by family, employer, and other social contacts, leading to a vicious cycle of anxiety increase→alcohol increase→relief of anxiety by excessive alcohol intake→social disapproval→anxiety increase.

The psychodynamic formulation of the overindulgent mother and the resultant excessively demanding child does apply to some patients, and therefore this concept should be reviewed. In early life, immediate soothing of the infant by early pacifying could produce an impulsive individual who later reacts with frustration and anger to attempts at delayed gratification. The use of alcohol to pacify the discontent may also be interpreted as a hostile act to spite family and friends. From the viewpoint of some analysts, the subsequent alcoholic debasement satisfies the guilt aroused in the patient for his hostile alcoholic acts against the people who interfere with his immediate gratification. Although this type of formulation does not apply for many substance abusers, it can serve as a therapeutic guideline for those patients who fit the description.

Some of the older personality theories that were proposed as etiologies of substance abuse, such as passive-dependent or narcissistic personalities being more likely to develop problems with chemical dependency, have not been corroborated in a number of studies of these patients (Westermeyer 1976*b*). Although some psychologic factors did appear more frequently in the substance-abusing groups 15 to 20 years prior to admission to treatment centers (the MMPI was administered during the college years), no consistent personality patterns were more apparent in this group than in a control group (Hoffman et al. 1974). These substance abusers, when compared with their control peers, were more likely to desire independence in adolescence or to be rebellious, were more impulsive, were less likely to share decisionmaking with a group, and were more likely to have experimented with alcohol and drugs during adolescence with an accompanying low self-esteem. However, evaluation of their adjustment at college did not show any more serious maladjustment during the time of testing than did that of their comparative peer groups. Similar findings have been reported in heavy drug users (Goldstein and Sappington 1977). A study of MMPI profiles, which had been administered to all entering freshmen prior to any significant drug use, compared heavy users of marijuana and hallucinogenic drugs with a non-drug-using group. Those who later became drug users appeared to have less ego strength, to be less reserved, more impulsive, and more resistant to authority, and less likely to learn by experience than the control group. However, the MMPI profiles of both groups were within normal limits. Presentation of these data may enable the medical student to understand that chemically dependent patients, when abstinent, are not that different from the remainder of the patient population; thus, it may not be appropriate to generalize about the "antisocial" personalities of substance abusers. It should also be pointed out to the students that there

are several subgroups of substance abusers who are unable to abstain for 1 year or more; those patients include skid row alcoholics, those with organic mental disorders associated with substance abuse, and others with deteriorated personalities.

The relationship between *substance abuse and depression* does have clinical importance, and this not infrequent association should be presented to the medical student. One of the most difficult clinical problems in substance abuse is attempting to differentiate primary from secondary depression in a substance abuser. Substance abusers have a very high incidence of depressive symptomatology secondary to the depressant effects of the chemical, the deterioration of lifestyle, the loss of meaningful relationships, and other environmental causes. In these patients, we may find evidence of a primary affective illness that either preceded the onset of the substance abuse problem or appears to be a distinct, separate problem from the chemical dependency. The patients may be using alcohol or drugs in an attempt to alleviate or temporarily obliterate the dysphoric symptoms. If one is able to elicit a history of a severe depressive episode occurring months after the patient has initiated complete abstinence and without any other significant environmental changes, then the diagnosis of a primary affective illness is more likely, particularly if there is a family history of affective disorders. The therapeutic importance of delineating these two types of affective problems has been concisely summarized by Schuckit (1980*a*).

Use and possible subsequent misuse of drugs for other psychological symptoms such as phobic problems, situational social anxieties, overeating, and sexual inhibitions should also be reviewed during this part of the course.

Psychologic Consequences of Substance Abuse

It is important to show the student not only that psychologic problems may contribute to the development of a Substance Use Disorder, but also that the alcohol or drug abuse problem results in additional psychologic trauma and deterioration. Thus, some of the personality characteristics and psychologic problems displayed by the patient may not have been present at the outset of the drug or alcohol problem. The best example of this concept can be seen in the severe personality changes and psychologic consequences of chronic substance abuse in the skid row or revolving-door alcoholic (Brisolara et al. 1968). After many years of alcohol abuse as well as many arrests for drunkenness, this individual has developed pathologic low self-esteem, an inability to identify with any segment of society except his fellow bottle companions, pitiful unrealistic optimism about the future, and increased distrust or emotional isolation, as measured by the Psychiatric Evaluation Profile (PEP). Many of these alcoholics have no difficulty in admitting their drinking problem, but the denial mechanism may become very inappropriate in regard to future plans and expectations. The inappropriateness of the denial mechanism may be exacerbated by the frequent presence of alcohol-induced organic mental disorders in this population.

The specific type of substance abuse may also have some effects on personality traits. The more illegal the drug, the more conscious deceit the patient must

use in obtaining and self-administering the drug. As a result, it is not unusual to find chronic narcotic or "speed" users displaying more manipulative personalities and more suspicious attitudes toward the typical representatives of society, including physicians. If one regards trust as the cornerstone of the therapeutic relationship, then the difficulty in treating these patients becomes apparent. The student has to learn that he may frequently require help from other community resources, such as specialized impatient services or NA, in treating these patients.

The long-term chemical dependency withdrawal effects, or what has been labeled "The Protracted Withdrawal Syndrome," should be reviewed as part of this discussion (Kissin 1979; Gallant in press). This syndrome consists of such physiologic variation as respiratory irregularity, labile blood pressure and pulse, impairment of slow-wave sleep, decrease in cold-stress response, and psychologic complaints of spontaneous anxiety, depressive episodes for no apparent reason, and even transient psychotic reactions. Biochemical changes including decreased norepinephrine and testosterone and diminished tryptamine metabolism and growth hormone response have been described in the literature (Kissin 1979). This syndrome has been reported as lasting from 1 month to more than 1 year. For the diagnosis of this syndrome, it should be determined that the patient did not have a combination of these symptoms prior to abstinence, and no metabolic or psychologic causes for the behavioral and emotional abnormalities should be apparent (except for the abstinence from alcohol). Cognitive performance may be impaired, and the patient may show no significant improvement during the first month of withdrawal (Eckardt et al. 1979). Therefore, the physician should move cautiously in treating this patient and avoid abrupt confrontation therapy. Explanation of the symptomatology may prove to be anxiety-relieving to both the patient and his family and may help to avoid a chemical dependency relapse.

The peculiarities of "alcoholic blackouts" and "pathologic intoxication" with sociopathic behavior (Alcohol Idiosyncratic Reaction in DSM III) should be emphasized (Gallant in press; Thompson 1963; Maletzky 1978). The diagnostic problems and the therapeutic management of this potentially dangerous substance-induced syndrome should be detailed (Gallant in press). The abnormal episodic, amnestic behavior frequently displayed by these patients during alcohol consumption may be confused with temporal lobe epilepsy, schizophrenia, or other drug intoxications.

The abnormal behavioral reactions with alcohol or barbiturates or mixed alcohol-drug combinations can be confused with psychotomimetic reactions such as that seen with phencyclidine (PCP) (Gallant in press; Cohen 1979). Complaints of analgesia, cerebellar dysfunction with ataxia and slurring of speech, hyperacusis, nausea, and dysphoresis can all be seen with PCP intoxication as well as with alcohol and other sedative drug intoxication (Garey 1979). At times, PCP and other cyclohexylamine compounds can produce psychotic reactions that may be indistinguishable from schizophrenia; this reaction can only be diagnosed by fluid assays (Gallant 1981). The psychologic, psychopathologic, and tolerance effects of marijuana should be objectively reviewed during this part of the course presentation. An excellent monograph on this subject was published by the National Institute on Drug Abuse (NIDA); this book should be available as resource material for both students and faculty (see Petersen under Monographs in Annotated List of Curriculum Material). Intoxication and withdrawal symptoms of stimulants, hallucinogens, alcohol, volatile solvents, hypnotics, tranquilizers, and opiates should be graphically presented to the students so that

the signs and symptoms may be more readily remembered and thus recognized in a patient (see tables 1–11 in appendix D). During this part of the presentation, the neuropsychological findings of cognition impairment due to sedative and hypnotic use should be reviewed (Bergman et al. 1980; Hendler et al. 1980).

Variations and Effects of Cultural Attitudes

The varieties of drugs available for potential abuse are innumerable. There are more than 5,000 alkaloidal plants that have the potential to be hallucinogenic (Schultes 1969). Cultural attitudes play an important role in the acceptance or rejection of these substances. The historical use of *Amanita muscaria* in Siberia, *Psilocybe* in Mexico, *Cannabis sativa* in Asia Minor, *Virola* varieties in Colombia, *Iboga* in Gabon, and *Datur* in the Andes region all lead to the conclusion that such compounds will be available for use for an indefinite period of time. While cultural approval may increase the accessibility to a drug, ritualistic use of the drug by the culture may help to inhibit the abuse or overuse of the drug (Westermeyer 1976*b*). Other cultural influences that may tend to lower the incidence of drug abuse are the labeling of solitary use as deviant and of intoxication as shameful. The lower rates of alcoholism among Jewish people but the relatively high rate of heavy hallucinogen use in Jewish youth, and the high rate of opiate abuse but the low rate of alcoholism in the Meo of southeast Asia are examples of cultural effects (Westermeyer 1976*b*). Ethnic drinking habits within the United States should be presented at this time. Racial and sexual differences in alcohol and drug use should be reviewed and the possible reasons for the incidence differences discussed (Dawkins 1980; NDIA 1979*a*). Questions such as "Why is alcoholism higher in males?" and "Why do black women have a higher proportion of both abstainers and heavy drinkers than have white women?" should be addressed, even though some of the answers are not known at this time.

The incidence of adolescent alcohol and drug abuse depends upon such cultural factors as peer impact, laws concerned with consequences of alcohol and drug use, and family psychodynamics, as well as biological factors. The relationship between lowering the drinking age and the increase in adolescent drunk arrests and adolescent drinking-driver accidents has been adequately documented (Smart 1976). In the province of Ontario, Canada, an area that has a reliable data collecting system for drinking and driving accidents, the legal drinking age was lowered from 21 to 18 years in July 1971. Lowering the drinking age to 18 years has a "drifting down" effect, as many of the 18-year-olds will purchase alcohol beverages for the next younger group, 15 to 18 years of age, whereas 21-year-olds are less likely to associate with the 15 to 18 age group. By 1972, the percent of persons under the age of 18 arrested for drunkenness almost tripled, while there was only a slight increase in other age groups. During the same time interval, the percentage of the 16 to 19 year drinking driver accidents increased by 50 percent, as compared with an overall decrease in the older age group during the same period.

The influence of peers upon alcohol and drug abuse in adolescents has been demonstrated in a number of studies (Lassey and Carlson 1979; Kandel 1975; Johnston et al. 1980). In a survey of social and urban

drinking among teenagers, peer influences are "clearly more significant in the urban setting while family and school (counselor) influences seem stronger in the rural settings" (Lassey and Carlson 1979). In two longitudinal studies of 5,468 high school students, it was found that 27 percent of the students who smoked cigarettes or drank alcohol beverages progressed to marijuana within a 6-month period, while only 2 percent of abstinent students proceeded to marijuana. During a subsequent 6-month period, 26 percent of the marijuana users progressed to "more illegal" drugs such as LSD, amphetamines, or heroin, but only 1 percent of nondrug users and 4 percent of legal drug users did so. This progression was found in each year of high school. Specific patterns of use emerged, with few users proceeding to a "more illegal" drug without first trying a more socially acceptable drug. One of the conclusions in this study was that the stages of drug use were "probably culturally determined" (Kandel 1975). Even more extensive surveys of drug use in high school students (from approximately 125 private and public schools) indicate that "much of youthful drug use is initiated through a *peer social-learning process;* research has shown a high correlation between an individual's illicit drug use and that of his or her friends" (Johnston et al. 1980).

The alcohol beverage industry not only saturates college newspapers, making up more than one-half of all national advertisements, but also uses the majority of the advertisements to influence peer pressure on students to join in drinking (DeFoe and Breed 1979). In a sample of nationwide college newspapers alcohol advertisements, the ridicule of studying, graduation, and education through the substitution of beer drinking was a dominant theme. The author of this review paper also reported that 1.8 percent of the students sampled had been arrested for driving while intoxicated during the previous year. Other alcohol-related problems on campus were missed classes owing to the effects of drinking, damaged campus property, and deterioration of grades. This review documents the "antieducation" and the importance of the peer pressure themes of these alcohol beverage industry-supported advertisements. All future physicians should be aware of these attempts to influence the media and the consumers.

Genetic Aspects of Alcohol and Drug Abuse

To study environmental influence as a factor in the development of disease, adoption studies (Crowe 1975) use only those adoptees separated shortly after birth from their blood parents. Comparison is made between the adoptees whose blood parents have the disease under investigation and those who do not. In one study, although the index adoptees of alcoholic parents and control adoptees were interviewed only at a mean age of 30 years, the index adoptees already had more than three times the incidence of alcoholism, a significant difference (Goodwin et al. 1973). The genetic influence of an alcoholic parent was also demonstrated in a study of half-siblings (Schuckit et al. 1972). Children of alcoholic biologic parents raised by either alcoholic or nonalcoholic parents had the same incidence of alcoholism. Children of both alcoholic and nonalcoholic biologic parents who shared their home with an alcoholic proband showed no greater evidence of alcoholism than

did those individuals who did not share their childhood home with an alcoholic. The history of an alcoholic biologic parent was the only predictor of alcoholism.

In a review of the genetic studies of alcoholism, Goodwin (1979) suggested that one subgroup of alcoholism be categorized as "familial alcoholism" with an early onset of loss of control, high tolerance for alcohol, and absence of significant psychiatric pathology. If a genetic substrate does exist for a specific group of alcoholics, it may relate to acetaldehyde levels. Blood acetaldehyde concentrations have been reported to be significantly elevated ($p < .004$) after a single dose of ethanol (0.5 ml/Kg) in 20 young, nonalcoholic males with alcoholic parents or siblings as compared with 20 young, nonalcoholic male offspring with no family history of alcoholism (Schuckit and Vidamantas 1979). These elevated acetaldehyde levels could result in a tetrahydroisoquinoline product from catecholamine condensation, a compound that may be related to the development of addiction.

If significantly elevated acetaldehyde levels after alcohol ingestion do play a role in the genetic subgroup of alcoholism, then acetaldehyde dehydrogenase deficiency may account for this clinical phenomenon (Jenkins and Peters 1980). Liver biopsy specimens obtained from 12 nonalcoholic and 11 control subjects showed that the cytosolic component of the hepatocyte in alcoholics was selectively depleted of acetaldehyde dehydrogenase, a finding that could be directly related to the genetic defect.

While these genetic and pathologic studies point to the existence of a genetic subgroup of alcoholics, it should be emphasized that the majority of offspring of alcoholics never do develop alcoholism and a significant number of alcoholics have no family history of alcoholism. Therefore, when this material is presented, it is important to cite the specific studies and references containing the specific percentages; no generalizations or definitive conclusions should be presented, since they could lead to inappropriate genetic counseling of patients.

In other areas of drug abuse, such as narcotic addiction, genetic data are scanty. Although Vaillant (1966) did find addicted relatives in 24 of 100 narcotic addicts that he investigated, almost all of the addicted relatives were siblings, and there was no control group for comparison. Only one of the narcotic addicts had a parent with narcotic addiction. Since narcotic use is illegal and greatly influenced by legislation, law enforcement agencies, socioeconomic circumstances, and accessibility and has a relatively short history compared with alcohol, it is not surprising to find a comparatively low incidence of parental addiction in a 1966 study. Competent retrospective as well as prospective genetic studies on narcotic addiction and other drug abuse problems still remain to be done.

Chapter 3
Early Diagnosis of Alcohol and Drug Abuse and Indications for Patient Referral

Diagnosing the Early Phases of Alcohol and Drug Abuse

The Interview Process

As with other medical illnesses, the earlier the physician establishes the diagnosis of substance abuse and begins treatment, the better the prognosis. Teaching the medical student how to interview the patient in a sensitive manner in order to obtain a reliable history is probably the most important goal in medical school. In the field of alcohol and drug abuse, development of interviewer sensitivity to the patient is a necessity, and no one is more suitable to teach this approach than the faculty psychiatrist, provided that he presents a teaching model that is simple and straightforward. Unnecessarily complex psychiatric teaching models in medical school will create more resistant attitudes in a student who already feels negative about substance-abusing patients (Waring 1980).

As with all items in a medical history, the chemical use history should begin with questions about the least threatening or safest subjects. Thus, the faculty member should instruct the student to begin by inquiring about substances that are legal or culturally acceptable, such as the number of cups of caffeinated beverages per day, progress to the number of cigarettes (filtered or unfiltered), and then to the daily number of glasses of wine and beer and/or ounces of liquor per day. In addition to the type and amount of drug, the interviewer should try to assess the pattern of usage. After each specific drug is discussed, the patient should be asked a question about the effects of the drug behavior upon other people, starting with caffeinated coffee; e.g., "Does your spouse or do your fellow employees ever comment that you may be drinking too much coffee?" If the answer is yes, a subsequent question should be, "Do you become more irritable after four or five cups?" The same questions can be asked about wine, beer, or other drugs as each substance is reviewed in the history. After these questions, the student then has to be taught how to cross sensitively from legal drugs to marijuana and then to the "more illegal" drugs. Such introductions to these subjects as "I do have to ask these questions because some of these drugs can cause changes in a person's behavior or affect the action of other drugs" may help to smooth the path. These questions must be asked in a nonjudgmental manner, and labels such as "alcoholic" or "addict" should be avoided at this time. Attention to type, amount, and pattern of drug usage will result in more reliable information. At the beginning of a therapeutic relationship, one should never attack the denial mechanism. Instead, the clinician should work around it without allowing the mechanism to prohibit him or her from obtaining a reliable substance abuse history. Additional information on the initial interview, with a sensitive approach to the substance-abusing patient who is using the denial mechanism in an exaggerated manner, can be found in the Medical Monograph Series volume entitled *Diagnosis of Drug and Alcohol Abuse* (Cohen and Gallant in press).

It should be emphasized to the students that the substance use history is an essential part of all medical examinations and that a methodical but concerned approach will decrease the number of undiagnosed cases. Carefully worded questions about chemical use in other family members may yield additional information. Such questions may be more easily accepted by the patient who is told that 22 percent of U.S. families have a problem related to alcohol (Gallup 1981), and thus it is not an unusual problem for any family.

375-921 O - 82 - 3 : QL 3

In most U.S. medical schools, the appropriate setting to initiate the teaching of the interview process could be either during the freshman course on human behavior or during the history-taking instructional course (frequently titled Physical Diagnosis), usually conducted by the department of medicine aided by the department of psychiatry during the sophomore year.

Use of the Diagnostic Questions for Early or Advanced Alcoholism (appendix B–1) and the MAST scale (appendix B–2) may help the student gain a more complete understanding of the diagnostic approach. After an initial relationship with the patient has been established, use of these scales may enable the patient to take a more honest look at himself or herself. The Diagnostic Questions for Early Advanced Alcoholism are somewhat more subtle than the MAST scale. Students should be asked to complete these scales themselves on an anonymous basis, and the results can be reviewed during the next class session. This teaching method of change from passive to active participation helps to maintain the attention of the class.

Early Symptoms and Signs of Alcohol and Drug Abuse

Frequent headaches, recurrent gastrointestinal complaints, recent absences from work or school based on vague physical complaints, or sudden unexplained mood changes are all possible early symptoms of substance abuse. Somewhat more advanced symptoms may be the continued use of alcohol or drugs in the same amounts even after having sustained injuries while using alcohol or drugs or after being charged with driving while intoxicated (DWI). Increased frequency of use despite "blackouts," antisocial or belligerent behavior while under the influence of chemicals, or confrontations by spouse or friends about usage are often symptoms of loss of control. In order to validate the diagnosis in some suspected cases, when a close family member is available, the physician may ask the patient if the family member could accompany the patient during a subsequent visit.

Frequent injuries or cigarette burns due to drowsiness may be other symptoms of alcohol and drug intoxication. Unexplained mood changes or a history of physical display of anger may be other indications of a chemical use problem. For a graphic display of cutaneous signs of alcohol and drug abuse, table 1 can be used as a handout (Cohen and Gallant in press). Tables 2 through 10 can also be utilized as handouts to demonstrate signs and symptoms of stimulant intoxication and withdrawal, hallucinogen intoxication, hypnosedative intoxication and withdrawal, and opiate intoxication and withdrawal. Table 11 is a summation of alcohol and drug signs and symptoms that the patient may present during the interview and physical examination. The use of this table may facilitate the learning process, since it may be less difficult for the student to memorize than reading paragraph descriptions of the various signs and symptoms of these many drugs.

Of course, the simplest test for alcohol abuse may be measurement of the blood alcohol (Dubach and Schneider 1980). Of 1,476 patients screened at the University Hospital of Basel, 12 percent of admissions to the surgical service, 9 percent of admissions to the medical service, and 2 percent of the outpatients had blood alcohol levels higher than 100 mg%. Any patient who can tolerate a blood level of alcohol of 100 mg% or 150 mg% without the appearance of intoxication should be strongly suspected of having a drinking problem. Other laboratory data that may be associated with early signs of alcoholism are an increase of gamma glutamyl transpeptidase (GGT was positive in 63 percent of middle class alcoholics), an SGOT increase

(48 percent), macrocytosis without anemia (26 percent), elevated serum triglyceride (28 percent), alkaline phosphatase (16 percent), bilirubin increase (13 percent), and an increase in uric acid (10 percent) (Morse and Heest 1979). Routine physical examinations and lateral chest X-rays may show rib and/or thoracic vertebral fractures in as many as 30 percent of alcoholic male patients while nonalcoholic male patients will only show a 2 percent incidence ($p<0.001$) (Israel et al. 1980). During the junior clerkship year, students should be encouraged to review charts for these laboratory findings and administer MAST scale to those patients who show abnormal findings. Of course, appropriate treatment referral should be part of this teaching exercise.

A concise review of diagnostic and assessment techniques that are specific for alcoholism can be found in the monograph, *Diagnosis and Assessment of Alcohol Abuse and Alcoholism* (see Annotated List of Curriculum Material). The Brief Alcoholism Screening Test (Woodruff et al. 1976) is a highly reliable index of the presence of alcoholism. The questions are simple and easy to remember:

1. Has your family ever objected to your drinking?
2. Did you ever think you drank too much in general?
3. Have others (such as friends, physicians, clergy) ever said you drink too much for your own good?

These three questions will correctly identify about 96 percent of alcoholic patients and misidentify only 10 percent of nonalcoholics (Woodruff et al. 1976).

The amotivational syndrome associated with marijuana use, as it occurs in our culture, is well described in two articles by Cohen (1980; 1981) and should be part of this presentation. In adolescents an unexplained drop in grades, chronic tardiness, increased absenteeism, deterioration in personal hygiene, and decrease in physical recreational activities are all possible symptoms of increased marijuana use or possible abuse of other sedative-hypnotic drugs. Personality traits such as impulsivity and rebelliousness may be early warning signs of future drug misuse (Goldstein and Sappington 1977). A combination of two or more of the following symptoms in college or medical students may be a predictor of future drug misuse: failure in any area of education; difficulty in social functioning; failure to find humor in one's role as a student; frequent use of mood-altering drugs as well as alcohol; irregular class attendance; friction with more than one professor. The thrust behind this part of the presentation should be that the physician may be even more vulnerable to substance abuse than his patients; prophylaxis and early diagnosis should be practiced not only with patients but within the medical profession (see appendix A).

Prescription drug misuse or dependency, as illustrated by nonbarbiturate compounds such as the benzodiazepines, may be associated with mild withdrawal symptoms of anxiety, insomnia, dizziness, headaches, and anorexia with rapid weight loss (Benzodiazepine withdrawal 1979). In one series of 24 cases, 22 patients reported that they had tried and failed to give up diazepam (Maletzky and Klotter 1976). The physician should be cautious with patients who claim that they lost their sedative prescriptions or that the medication was mistakenly discarded and with those who have an unusually high tolerance of sedative-hypnotics.

Indications for Referral for Psychiatric Consultation or to Specialized Treatment Programs

As stated in the introduction, it is the opinion of the author that physicians in clinical practice should be capable of managing the treatment of the great majority of substance abusers. With the help of a spouse and family, if available, and with the aid of AA, Al-Anon, NA, Pills Anonymous (PA), and other community resources, the physician may be able to treat the patient without psychiatric referral or specialized inpatient therapy. However, those substance abusers who have had episodes of non-drug-related psychotic reactions such as schizophrenic disorders, paranoid disorders, or bipolar disorders (as listed in DSM–III) should be referred for psychiatric management (American Psychiatric Association 1980). Patients with severe recurrent major depressions when abstinent should also be referred for psychiatric consultation and possible antidepressant drug management by the consultant. If the patient has a serious long-standing marital or sexual problem that presents during abstinence, then referral to a psychiatrist would be appropriate. However, it is not unusual to see many of the psychologic problems and interpersonal difficulties that occur with the patient during his stages of drinking or drug abuse gradually resolve as the duration of abstinence increases. As previously noted, many of the psychologic problems associated with substance abuse are consequences of the lifestyle.

Specialized rehabilitation programs can be of additional help to the physician by temporarily immersing the patient in an inpatient program totally concerned with his chemical dependency and personality problems. These types of programs are particularly useful for those patients who have an extremely rigid denial mechanism and who may only be temporarily cooperating with abstinence treatment because of recent environmental pressures. The very depressed patient and the patient who has recently undergone a very severe blow, such as loss of job because of chemical dependency, can also profit from such a program that helps the patient to stop and reexamine his lifestyle and future goals.

Those patients who have recently undergone a severe withdrawal reaction from substance addiction and are showing some evidence of symptoms of the protracted withdrawal syndrome would profit considerably from continued inpatient treatment in a specialized rehabilitation unit.

Since many prescription drug and illegal drug abusers have had to develop more manipulative personality traits than alcoholics in order to maintain their habituation or addiction, these patients have more difficulty in establishing a trusting therapeutic relationship. It appears that a greater percentage of these patients than of "pure" alcoholism patients require specialized inpatient rehabilitation programs as the first step in managing withdrawal and initiating ongoing therapy. It is extremely difficult and in some cases impossible for the practicing physician to establish a trusting therapeutic relationship with a drug abuser by seeing this patient once or twice weekly as an outpatient. Specialized rehabilitation programs as well as NA and PA can be of considerable help with this type of individual, who can frequently return to the referring physician for adequate followup after discharge from the rehabilitation program.

It is important to emphasize to medical students that most substance abusers do not like to view themselves as "psychiatric" patients, "real alcoholics," or "real addicts." Treatment by the family physician may be more acceptable to these individuals, particularly in the beginning phase of the problem and while the denial mechanism is still strong. A hasty suggestion or too rapid referral of the patient to specialized treatment facilities or to a psychiatrist may only result in termination of the relationship with the physician, who was just starting to make headway with the substance abuse problem.

Chapter 4
Essential Elements of the Therapeutic Relationship and Techniques of Early Intervention and Treatment: Special Techniques With Adolescents

Essential Elements of the Therapeutic Relationship

Trust is the essence of the doctor-patient or therapeutic relationship as well as of other human relationships. Without this trust, the most intense efforts of a brilliant physician may be useless when it comes to helping a patient. As distrust enters the relationship, patient noncompliance will assuredly increase, as will the dropout rate. This basic element of therapy should be emphasized throughout all 4 years of medical education. Unfortunately, the theme of trust is not discussed frequently enough in most medical schools.

During the introduction of lectures on attitudinal changes in the freshman year, interviewing techniques in the sophomore year, and exposure to the variety of treatment techniques during the junior and senior years, the importance of trust must be emphasized again and again. Often even the most experienced psychiatrists are suddenly surprised by an expression of distrust from a long-term patient who has never before shown any evidence of a lack of trust in the therapist.

A sensible division of the three important elements of a therapeutic relationship has been described by Truax and Carkhuff (1967). The concepts of nonpossessive warmth (or the ability to show the patient that you care without "suffocating" him or her), accurate empathy (ability to convey to the patient that you understand his or her feelings), and genuineness (conveying honesty to the patient and being able to admit your mistakes in an appropriate manner) are the foundation for the therapeutic relationship. When the physician is able to incorporate these three elements into his relationship with the patient, a bond of trust is established and true therapy begins. However, without the factors of caring, empathy, and honesty, the patient's symptoms may worsen (Truax and Carkhuff 1967). When these three factors are present to a high degree, then the patient will show greater evidence of constructive personality change. It is essential for all physicians to develop and improve these positive attitudes as long as they are practicing clinical medicine. These essential elements of the doctor-patient relationship may well be the most important concepts that we should teach to the aspiring physician.

Techniques of Early Intervention and Treatment

Early intervention with a substance abuser telescopes or compresses the past crises caused by substance abuse into one dramatic confrontation, in order to brush aside the denial mechanism so that the patient will agree to get help. It is a therapeutic maneuver designed to help the patient *now*, rather than to wait interminably for the substance abuser to "hit bottom," to lose or destroy his or her family, health, or job; if we wait, it may be too late. For example, it is not unusual in the field of substance abuse to treat a severe, chronic alcoholic successfully, and then see him hemorrhage to death from esophageal varices 6 or 12 months after he stopped drinking.

Some AA and Al-Anon members are reluctant to recommend this method because they have the opinion that the patients should "hit bottom" and make the decision for themselves while the family attempts to stay detached. However, when early intervention is used with adequate preparation and sensitivity, it may save the patient and the family many years of suffering, and in some cases prevent the marriage from breaking up. There are a number of different intervention approaches (Johnson 1973). Each therapist modifies his or her approach according to the available human resources, treatment facilities, and attitudes about confrontation techniques.

As mentioned before, adequate preparation, sensitivity, and experience are required for this therapeutic intervention. Therefore, it is recommended that this technique be reviewed toward the end of the junior psychiatry rotation or during the senior year. The following steps describe the approach adopted by this author. Usually, it is the spouse of the chemical abuser who calls, saying that he or she is upset and feels hopeless because the substance abuser refuses to see a problem or the need for help. There is an initial interview with the spouse to identify the key people in the environment who have the most influence on the substance abuser. The therapist explains to the spouse that she or he is the patient and thus the confidentiality of the abuser is not involved. The next meeting will include the teenage or adult children and possibly one or two close friends, whose attendance is requested in order to validate the spouse's history as well as to educate them about substance abuse. They are asked to assume a nonjudgmental attitude and make a list of three to five painful or embarrassing events, avoiding labels, associated with the *behavior* of the substance abuser while intoxicated. During this session, the three key attitudes for intervention are emphasized: Always express genuine concern to the substance abuser, maintain a nonjudgmental attitude, and be honest. The spouse is told to inform the chemical abuser about each meeting, inviting him or her to attend, since the specific goal of the intervention is to have the substance abuser come in to see the therapist for at least one visit. It is then the job of the therapist to convince the chemical dependency patient to enter therapy.

The spouse should also explain to the substance abuser that the children and friends were included at the request of the therapist, not through the spouse's choice, so that some of the anger will be directed toward the therapist in order to avoid any additional anger in the household. Nothing is done behind the back of the substance abuser during this type of intervention approach; this method is considered to be safer and less likely to precipitate unexpected tragic events such as a sincere or manipulative suicide attempt.

Using their lists of painful events, the members of the newly composed intervention team (spouse, children, friends) should rehearse part of the confrontation with the therapist in order to avoid any gross disagreements and to eliminate any individuals who may tend to overprotect the chemical dependency patient. The time of the actual confrontation must be most carefully planned to be sure that the abuser will be drug-free at that time. This is the only session during this type of intervention approach that is conducted without warning the chemical abuser.

Usually, the author enlists the aid of another couple who has had a successful intervention and has this couple join the intervention. Their presence helps to defuse the situation by offering the person being confronted an opportunity to identify with someone else who has gone through the same painful process.

Finally, it must be emphasized that there has to be a commitment by the entire intervention team that there is a great deal at stake if the substance abuser refuses the treatment options of the intervention. It is

unusual for the chemical abuser to reject the confrontation and the treatment options, but the intervention team should be prepared for the worst. For example, after the lists describing the substance abuser's behavior are read, the spouse may have to end the discussion by stating, "If you do not follow up with Dr. ———— at least once, then we will be separating until you do so." With the scales weighted so heavily, separation versus one visit to the physician, it is easy to see why it would be unusual for the person to refuse one session. Possibly, one of the reasons why this type of technique rarely fails is that the chemical dependency patient has *not* been pushed into a corner without options. The threat of separation is quite severe, compared with the alternative of seeing a physician for one visit. Another reason for the success of this type of approach is that, before the massive intervention, the patient was able to keep his head in the ground like an ostrich; angry individual accusations about the substance abuse behavior only made the patient become more defensive with his denial. Now, his head has suddenly been plucked out of the ground and he is forced to look at the effects of his substance abuse behavior on the people whom he loves and on himself, thus having to abandon at least a small piece of his denial mechanism. Even if the patient refuses to return to the therapist after the followup session, he still has had to give up a piece of his denial, and the entire family problem can now be handled in a more realistic manner by all concerned. For added details on this procedure and for use as a handout for medical students, see appendix C.

At this point, it is important to teach the student about the method of using treatment contracts with the patient. Optional contracting may be utilized as one followup of the confrontation process. During the confrontation, the substance abuser can be offered the choice of a visit with a physician for an initial interview, commitment to ongoing outpatient treatment, or referral to an inpatient service. In a great majority of the cases, the patient will select the choice of seeing the physician for one visit. During the initial visit, contracting on disulfiram (Antabuse) can be used with the alcoholic patient agreeing to take the medication if he drinks again, or with the drug abuser, contracting can be made with a decision to enter an inpatient service for detoxification if he has a "dirty urine." The contracting should always offer the patient a choice of treatment modalities, each one leading to a more controlled treatment setting if the patient fails in the initial treatment arrangement. In this manner, the patient is not backed into a corner with no way out except an angry use of the denial mechanism. It should be stressed that it is highly unusual for the patient to totally reject the intervention confrontation, and very rarely does the substance abuser refuse the contracting options under these circumstances (Johnson 1973).

Special Intervention Modification With Adolescents

As Kandel's extensive evaluation of drug use in adolescents (1975) has shown, there is a progression of involvement of drug use among adolescents with legal drugs, such as alcohol and cigarettes, leading to marijuana and then progressing to "more illegal" drugs, such as LSD and heroin. The adolescent group of moderate to heavy drinkers is more likely to have access to marijuana, and the group of moderate to heavy

375-921 O - 82 - 4 : QL 3

"pot" smokers will have more contacts with the "more illegal" drug users and peddlers. The effect of peer impact in this group is immense, far more powerful than the effects of the therapist, the school, or, at times, the home environment. Therefore, it is essential to have one or two reliable, relatively "clean" peers of the young substance abuser available for the intervention. It is also important to attempt to find one or two healthy adult models with whom the adolescent drug abuser has a positive identification; these individuals may have a greater influence over the adolescent drug abuser than has the family. It is also essential for these adolescents to change their peer groups after the intervention treatment has been initiated. It is almost impossible for them to stay free of drugs or alcohol if they return to their former drug-taking peers, who will have a greater effect on the young substance abuser than the the therapist no matter how experienced he may be. Helping the youth to find and assimilate into new peer groups is one of the most important elements of therapy with the adolescent.

Chapter 5
Treatment of Acute and Chronic Phases of Alcohol and Drug Abuse

The specific techniques for therapeutic management of the substance abuse patient should be taught while the student is being exposed to the diagnosis and management of the patients on the wards and in the clinics; this training experience is most likely to be initiated during the junior year. Participation in such clinical settings as the emergency room, substance abuse wards, and psychiatry units helps the student to acquire patient experience and initiates future memory associations about therapeutic management. To attempt to teach therapeutic management without the presence of the patient can result in a boring, tedious teaching demonstration that will quickly disappear from the student's memory bank (Frost 1965; Foley and Smilansky 1980).

Treatment of the Acute Phase of Substance Abuse

Alcohol or Drug Intoxication

If the patient presents symptoms of slurred speech, loquaciousness, and cerebellar signs, there may be a natural tendency for the physician to attribute the patient's condition to alcohol or drug intoxication. However, neurologic and metabolic diseases that affect the cerebellar pathways as well as intoxication due to medically prescribed drugs can cause similar symptoms. The medical student has to be aware that alcohol or drug intoxication may be masking underlying physical sequelae and/or trauma secondary to substance abuse. There is no better way to learn these facts than participating in the historical and physical examination of this type of patient in the emergency room. The medical student should learn that cigarette burns, skin bruises with evidence of multiple trauma, child abuse, poor nutrition, acne rosacea, or needle marks may suggest the past history of substance abuse. The "live" patient and bedside teaching have greater impact on the memory traces than a lecture or slide demonstration of the physical findings.

The student has to learn that the initial contact with the patient in the emergency room is the beginning of therapy, not just a diagnostic game. The physician's attitude at the time of initial contact, even when the patient is intoxicated, may be vital in determining whether or not the patient will follow up with therapy. The teacher should stress that any anger or defensiveness on his part can only result in the patient's discontinuing any efforts at followup therapy for his or her alcohol or drug problem.

In conscious patients, medical observation and adequate nursing care should be sufficient after other causes of intoxicated behavior have been ruled out. The patient should be placed on his or her side with the face down in order to avoid aspiration of vomitus. Infusions should not be started unless the patient is dehydrated from vomiting or diarrhea; here, the student should learn that routine use of infusions may offer more iatrogenic risks than benefits. If a previous history of chronic substance abuse addiction with alcohol or sedative-hypnotics is elicited, then adequate institution of substitute sedative therapy should be made to avoid the development of severe withdrawal symptoms.

In the more serious cases of drug intoxication, when the patient is comatose or semicomatose, immediate steps should be taken to sustain the airway, assure a regular respiratory rate, and maintain the circulatory

system. The student should be trained to manage those patients who are comatose and are already showing impairment of respiration on admission. Several emergency steps can be initiated while awaiting the results of laboratory tests. In order to rule out severe hypoglycemia, 50 ml or 50 mg% glucose solution can be given intravenously (IV) with 100 mg of thiamine. If cutaneous evidence of possible narcotic use is present, the administration of IV naloxone in a dosage of 0.04 mg, repeated every 3 minutes, three or four times, may prove to be lifesaving in these situations and may even reverse ethanol-induced coma as well as trauma-induced shock (Gallant in press; Faden et al. 1981). In fact, coma induced by cardiogenic as well as septic shock has also been reported to respond to IV naloxone (Wright et al. 1980).

Another emergency procedure for the comatose patient with impaired respiration is the use of edrophonium chloride (Tensilon), which is relatively safe and is indicated when a history of progressive muscle weakness and other indications of myasthenia are elicited from friends or family. Compulsory rotation of junior medical students for emergency room duty is essential for this type of learning experience on how to treat the intoxicated or comatose patient.

Idiosyncratic Drug Reactions

Unexpected behavioral changes can occur while an individual is under the influence of alcohol. With alcohol, the terms "alcoholic blackout" or "pathologic intoxication" have been used to describe behavior occurring under the influence of alcohol for which the patient is amnesic when he becomes sober. The behavior may be routine and nonsignificant or verbally abusive and assaultive (Maletzky 1978). Psychotic reactions can occur during these blackouts, and the patient may be misdiagnosed as schizophrenic. If the patient has a previous history of violent behavior during a blackout, he is more likely to repeat this behavior during another blackout.

It may be quite difficult to realize when a patient is in the middle of an alcoholic blackout or another drug-induced psychotic reaction. If the physician senses that the patient is exhibiting symptoms of a violent alcoholic blackout (pathologic intoxication) or phencyclidine reaction, he should regard the patient as very dangerous and approach him as carefully as he would any patient who is totally incompetent during a violent episode. The guidelines for this situation (Gallant in press) are:

1. Be extremely cautious with motor movements; do not lean forward or make sudden motions.
2. Never disagree with the patient about anything he says; an individual who is on the verge of an explosion can be set off by any discordance in the environment.
3. Use your voice and body movements as therapeutic tools; the voice should be calm, with a monotone type of speech, never suddenly changing pitch or loudness.
4. Try to initiate a personal, familiar relationship with the use of the patient's first name in a calm and friendly manner (realizing that only this unusual type of situation requires such a familiar and nonprofessional approach).
5. Attempt to find out the names of one or two people that the patient feels closest to and has positive feelings for. Next, attempt to get the patient's permission to call the person by phone in order to bring someone with a positive affective charge in contact with the patient. The longer the conversation progresses, the less chance there is for violence.

6. Attempt to show the patient that you are his or her ally. Having the patient verbalize about positive affective relationships in the past or encouraging him to talk with a close friend on the phone may help to bring the patient out of the amnesia or drug-induced psychotic episode by recalling familiar events.

These steps should be taught to all medical students at the start of their psychiatry rotation during the junior year.

Alcohol and Drug Withdrawal

Substance abuse outpatient clinics and "social setting" detoxification units as well as medical detoxification units should be available for student teaching. For alcohol detoxification, it may be possible to manage approximately one-half of the patients in a home setting if a competent companion is available and the patient has no significant medical complications (Felmen et al. 1975). According to one of the investigators with extensive experience in nondrug detoxification from alcohol, fewer than 10 percent of these patients require a hospital setting (Whitfield in press). The availability of experienced AA members can be of great help to the physician in managing stressful nondrug detoxification at home or in a social setting detoxification unit. Arranging for the student to participate with one of the experienced staff members in helping a patient to withdraw from alcohol (or other drugs) will enable the student to understand and remember the withdrawal process in a more thorough manner. The description of nondrug withdrawal including the concepts of reassurance, reality orientation, and respect is detailed in another article by Whitfield (1980). Even when sedative-hypnotic medication is a necessary component of the withdrawal treatment regimen, Whitfield's environmental and psychologic approach can be of great help in reducing the dosage of drug required for successful detoxification. In those patients undergoing mild to moderate withdrawal symptoms, routine use of a sedative-hypnotic with a long half-life may produce accumulative adverse effects on coordination and interfere with the patient's ability to share responsibility for the treatment process (American Medical Association 1981). It appears that many physicians may too readily refer patients to inpatient facilities where they are automatically placed on medication regimens that make it more difficult to withdraw from the sedatives and hypnotics that they receive in the hospital.

The blood alcohol level may be used as one of the guidelines for making decisions about the necessity of placing the patient in a social or hospital detoxification setting. For example, if the blood alcohol level is 200 mg% and the patient appears to be alert and not too dysarthric, indicating a high tolerance and habituation, then the physician has to be on guard about the possible appearance of withdrawal symptoms as the blood alcohol level decreases.

Specific references on indications for nondrug versus drug treatment of withdrawal should be made available to the students, and they should be requested to use a scale such as the Abstinence Symptom Evaluation Scale (ASE Scale), described by Knott and his colleagues (in press), as an aid in learning and quantifying the symptoms indicative of the severity of the withdrawal syndrome (Gallant in press).

For severe alcohol withdrawal symptoms or Alcohol Withdrawal Delirium as described in DSM–III, either a specialized social or hospital detoxification setting is indicated, according to the severity of the syndrome. If a patient is poorly nourished, having difficulty taking foods and fluids orally, and has a past history of withdrawal convulsions, then hospitalization and drug management would be indicated. Use of such scales as the ASE Scale by the student (although this scale is not yet standardized) will enable him to understand and remember the exacerbation

and remission of withdrawal symptoms. Since many of the severe withdrawal patients who are seriously ill are referred to the psychiatry services in large general hospitals, it is essential for the faculty member teaching the course to be familiar with and be able to instruct the student on the medical management of this syndrome.

The use of benzodiazepines on a temporary basis may be of considerable help in those alcoholics who have experienced recent alcohol withdrawal convulsions, since compounds such as diazepam do possess specific anticonvulsant activity following alcohol withdrawal in humans as well as in animals (Guerrero-Figueroa 1970). If the patient is suspected of having moderate liver damage, the most appropriate available benzodiazepine may be oxazepam, which does not require hydroxylation by the liver and therefore will not accumulate in the patient. Other details of the inpatient management of this potentially dangerous medical problem should be presented to the student, but with emphasis on bedside teaching (Gallant in press).

There are many patients, particularly in the younger age group, who abuse other habituating sedative-hypnotics in addition to alcohol. These patients are more likely to have seizures, which may appear as late as 7 to 12 days after cessation of the longer-acting hypnotics such as diazepam. The combined alcohol-barbiturate addicted patient may be even more likely to have seizures during withdrawal. To calculate the dosage of medication required for withdrawing this type of patient, substitution of 15 mg of phenobarbital for each ounce of 100-proof alcohol may be made (Wesson and Smith 1974). Administration of 200 mg of pentobarbital on admission may help the physician to determine the extent of the addiction, since the appearance of ataxia with slurred speech at this dose suggests that the patient is not seriously addicted.

Management of the narcotic overdosages should always include IV naloxone as well as medical supportive measures to maintain airway, respiratory movements, and circulation. As previously mentioned, naloxone also has the ability to reverse alcohol-induced coma. For management of the acute narcotic withdrawal phase, methadone, a longer-acting narcotic, has been the routine drug of choice. However, the continuation of methadone maintenance after the acute withdrawal phase is still controversial. An excellent unbiased reference for student presentation and discussion is the concise but thorough review by Gollop (1978).

Rapid and relatively comfortable opiate detoxification, using a combination of clonidine and naloxone, has been reported to be successful for heroin addicts as well as for patients undergoing methadone detoxification (Riordan and Kleber 1980). The suppression of symptoms of narcotic withdrawal by clonidine allows this type of rapid detoxification to be accomplished during a 3- to 4-night program. The instructor should stress that the "alcohol-mixed-drug" addicts as well as other drug addicts (e.g., heroin or amphetamine abusers) are more difficult to treat as outpatients because of the illegal sources of their drugs. Therefore, as described in chapter 3, hospitalization for detoxification is almost always required for these patients, in contrast to the "pure" alcoholic who rarely requires drug detoxification on a general medical ward.

Management of the hallucinogenic intoxification cases can be presented to the medical students when discussing the treatment of mild to moderate alcohol withdrawal. Reassurance, reality orientation, and respect, as described by Whitfield (1980), may help to decrease or eliminate the need for sedatives. Since phenothiazines do reduce the seizure threshold and in certain cases actually potentiate anticholinergic psychotic reactions, use of these compounds should not be recommended. For the acutely agitated, assaultive, or

self-mutilative patient, intravenous diazepam *slowly* administered over a period of 1 to 2 minutes may be helpful. However, the use of verbal caring techniques should be emphasized.

Tables 1 through 11 summarize the signs, symptoms, and diagnostic aids of intoxication and withdrawal of alcohol, stimulants, hallucinogens, hypnosedatives, and opiates. These tables can be copied and used as handouts for the students. Some of these tables can be used as part of the final exam at the end of the junior psychiatry block.

Toward the end of treatment of the acute phase of withdrawal, a good therapeutic step is to ask a member of AA or NA to visit the patient while he or she is still uncomfortable with the substance abuse problem.

Treatment of the Chronic Phase of Alcohol and Drug Abuse

Since the great majority of the medical students will not be actively participating in specialized inpatient alcohol and drug abuse rehabilitation treatment units after they graduate, there is no need to offer more than brief descriptions of the available rehabilitative treatment programs in association with an onsite visit to such programs in the community. The brief explanations of the treatment programs should stress that there is more than one path to abstinence and that the primary responsibility of a treatment program is to offer multiple therapeutic options to the patient. Brief descriptions of group therapy, confrontation therapy, married couples therapy, biofeedback, and behavior modification techniques should be reviewed and appropriate references cited for those students who wish to pursue the subject further (Gollop 1978; Gallant et al. 1970; Watson and Woolley-Hart 1980; Neuberger et al. 1980; Agras 1972).

As in other areas of medicine, one of the major teaching goals should be to teach the student how to evaluate data in research papers. When comparing reports of varying treatment successes in different substance abuse treatment programs, the variables of definition of the problem under investigation, the socioeconomic class, age, duration of illness, genetic background, and marital status of the patient, as well as the different treatment modalities have to be considered before crediting a specific modality with a higher or lower success rate.

Use of Community Resources (AA, Al-Anon, NA)

Teaching the treatment of the chronic phase of substance abuse should emphasize the necessity of outpatient followup after specialized rehabilitation has been completed. Therefore, student exposure to such essential community resources as AA, Al-Anon, and NA should be repeated on several different occasions. For example, collaboration with community medicine departmental seminars during the freshman year can offer the opportunity of asking AA, Al-Anon, and NA members to describe their activities to the students and invite them to attend some open meetings. Again during the junior psychiatry clerkship, a special seminar devoted to these community resources should be conducted with additional invitations to attend the open

AA and NA meetings. Some Career Teachers in substance abuse make attendance of these meetings a mandatory requirement of the junior block. However, other instructors believe that students already negatively disposed to the spiritual aspects of AA's "Twelve Steps" become even more disenchanted by the requirement for mandatory attendance. Many large communities have several different types of AA and NA groups, such as youth AA groups, medical profession AA and NA groups, etc. Since medical students can identify more easily with younger patients or with physicians, exposure to these types of specialized groups may help the student to better identify with these patients and to find the meetings more stimulating.

When conducting the community substance abuse resource seminar with the students, it is better to avoid the classical "drunk or drug monologue" that some of the participants present in a self-centered manner (Henry and Robinson 1978). Asking the AA and NA members the following questions can encourage audience participation by the medical students: (1) What areas of help can AA or NA offer to the patient, and what areas do they consider off-limits (e.g., advice on medication)? (2) What can AA or NA offer the patient that the physician, in practice by himself, cannot? and (3) What are the steps that a physician should follow to contact AA or NA when he has a needy patient in the hospital or his office? It is not unusual for most physicians to have a member of AA or Al-Anon or NA as one of their patients, and the physician should be encouraged to use such individuals as helpful resources.

Special Problems of Female, Minority Group, and Elderly Substance Abusers

Special treatment considerations for female, elderly, and minority groups should also be presented to the student during this part of the presentation. As part of the class seminar, the negative attitudes toward female substance abusers have to be explained (see Annotated List of Curriculum Material). Realistic problems, such as female alcoholics feeling inhibited about speaking up at AA meetings, a fact documented in the literature, and feelings of alienation when confronted with male-dominated AA groups, should be discussed (Henry and Robinson 1978). Discussions of whether or not "all female" AA or NA groups might provide a more accessible entrance for help for many female substance abusers generally leads to an interesting debate between the male and female medical students. The differences in judicial attitudes toward female and male substance abusers as well as toward minority groups should be an integral part of the discussion (Fraser 1976; NIDA 1979*b*). The rapidly changing family role of the newly arrived Spanish-speaking people, the changing roles of the black male and female in our society, and other recent socioeconomic and cultural shifts should be reviewed in relation to their impact on the use of chemicals to relieve anxiety and depression, which is a frequent consequence of rapid changes in social and economic conditions (see Annotated List of Curriculum Material). The problem of alcoholism in the elderly has become more frequent simply because of the number of people over 65 has increased 700 percent since 1900 while the remainder of the population has increased 250 percent (Schuckit 1980*b*).

Because of the decrease in lean body mass, hepatic enzyme activity, and kidney excretion rate, people over 65 are more likely to develop a loss of control with lower dosages of alcohol than are the younger population. In addition, the increased incidence of other medical problems in this age group, the problems of adjustment to retirement, and the increase in incidence of depression can all lead to misuse of sedative-hypnotic agents (American Medical Association 1981).

Use of Disulfiram

The use of disulfiram (Antabuse) with alcoholics is still controversial among some professionals and laymen, who call it a "crutch" and say that the patient should not lean on any medications. At the other end of the continuum, it is felt that all alcoholics should use disulfiram indefinitely since this drug is less toxic than alcohol, and there is no reason not to use it unless the individual is going to drink. As has been stressed in this monograph, there are many different treatment approaches available for substance abusers; the use of disulfiram is one useful adjunct for many of these modalities. It may be that disulfiram is underused while some of the benzodiazepines are overused in the treatment of alcoholism. In one study of rehabilitation of noncirrhotic alcoholic patients, only 9 percent received disulfiram, but 22 percent were administered benzodiazepines (Reed and Backenheimer 1978). In the recent literature, a number of well-designed studies of disulfiram have shown that the use of this medication as an addition to other treatment modalities helps significantly to increase the abstinence rate (Gerrein et al. 1973; Fielder and Williford 1980). The value of the use of life-table analysis in evaluating response to treatment over time as compared with response at one point in time should be included in the presentation of the subject to the students (Fielder and Williford 1980).

In some other countries, routine use of disulfiram in the treatment regimen has produced excellent results (Jacobsen 1978). The compliance rate can be ascertained by urine detection procedures (Gordis and Peterson 1977). It is important to emphasize to the students that the following three essentials of informed consent must be present before giving a patient a medication such as disulfiram: (1) comprehensibility of the patient, (2) a state of voluntariness, and (3) information about the major risks and benefits. It is particularly important to explain to the patient that those individuals prone toward having schizophrenic or psychotic reactions are more likely to develop adverse psychologic reactions to disulfiram (Major et al. 1979).

Disulfiram can be used not only for an adversive reaction to drinking alcohol but also as a symbol of the patient's commitment to treatment. The student should learn that, in some treatment programs, disulfiram ingestion by a patient can also be symbolic of his commitment to his family. In one treatment approach, the spouse is asked to participate actively in the treatment program by administering disulfiram to the alcoholic. Thus, the patient is taking the disulfiram in order to decrease the spouse's daily anticipatory anxiety about the patient's drinking and to eliminate false accusations of having "sneaked a drink." Another positive approach is the use of disulfiram with the emphasis that it is an insurance policy rather than a "crutch" (Knott et al. 1980). The patient's reaction to this suggestion helps to estimate the degree of his denial and noncompliance in a treatment program.

The Goals of Controlled Drinking

Although the efficacy of controlled drinking therapies over a prolonged period of time has not yet been fully demonstrated, the controversy is of such interest in the field that the student should be exposed to the therapeutic concepts and the data (Miller 1978; Pattison 1976). Criticisms of the research with controlled drinking have varied from a lack of adequate control group to an inadequate duration of followup (Miller 1978). In addition, insufficient attention to genetic data and to duration of excessive alcohol intake have also been voiced as criticism of these studies. However, the emotional criticisms by those fearful that this approach will undermine the morale and success of AA should not be allowed to interfere with the scientific assessment of this behavioral treatment modality.

Goals of Therapy

The concept that abstinence is only the first step in treatment should be emphasized, stressing that this step is necessary in order for the patients to improve the quality of their lives. Abstinence as the sole goal of treatment success will eventually lead back to alcohol and/or drug use. Showing the patient how to enjoy life without drugs and to feel more worthwhile with an increase of self-esteem should be the ultimate goals of therapy. When these goals are attained, then the patient has too much to lose if he returns to alcohol or drug use. These goals of treatment have to be stressed with the students as well as with the patients. When teaching these goals, the understanding of individual patient assets has to be presented with the realization that some patients will have more limited goals than others (Pattison 1976).

Predictors of attrition from treatment programs should also be reviewed at this time (O'Leary et al. 1979). Depression and the patient's belief that he is in control of his alcohol or drug problem have high predictor values in prophesizing treatment dropouts.

The importance of the protracted withdrawal syndrome with fatigue, episodes of spontaneous anxiety or depression, labile vital signs, irritability, forgetfulness, periods of loss of concentration and high levels of distractability lasting for weeks or months after abstinence has been initiated should be reviewed (Gallant in press; Kissin 1979). A fully detailed explanation to the patient will help him understand that these symptoms may be a normal part of the withdrawal or recovery phase from substance abuse. This explanation can help the patient accommodate the discomfort temporarily and thus remain in treatment and maintain his abstinence (Gallant in press). This material is best covered during the end of the junior block of psychiatry or during the senior year.

Problems in Evaluating Success Rates of Substance Abuse Programs

Because reporting by alcoholics has been shown to be untrustworthy, any study that does not employ urine assays for alcohol at random intervals has an additional degree of unreliability (Orrego et al. 1979). Moreover, many of these studies either do not follow the patients for a long enough time or do not utilize reporting sources (e.g., spouses) other than the patient. Thus, the Rand Report on alcoholism and treatment and the comparative evaluation of "treatment" versus "advice" by Edward's group cannot be regarded as conclusive studies (Armor et al. 1978; Edwards et al. 1977). A review of these studies and their critiques for the medical students will provide the student with the opportunity to evaluate information on emotional issues in a constructive way (Gallant 1979; Cohen 1978). These studies also serve to teach the student that alcoholism, as well as drug abuse, is a heterogenous condition and may have a number of subgroups that could show different treatment responses to a variety of therapeutic modalities (Gallant et al. 1973). Another lesson to be learned from a review of these studies is that, when expensive treatment approaches are found to be relatively inefficacious in terms of personnel, time, and money, these data should stimulate the clinician to explore and evaluate new treatment procedures.

Teaching Treatment Techniques: Use of Recovered Patients

Recovery Panels

To demonstrate treatment modalities for substance abusers, the patient is an invaluable assistant teacher not only for the student but for the instructor. It is not unusual for the patient to surprise an instructor with an entirely unexpected interpretation of how a treatment technique or program helped him. The use of recovery panels consisting of a variety of professional and nonprofessional patients, including physicians as well as former "street addicts," enables the medical student to identify with and develop an optimistic view of the treatment of substance abusers (See Hostetler in part 2 of Annotated List of Curriculum Material). Presenting this type of patient-forum and encouraging questions from the audience help to make the teaching of treatment modalities much more interesting for the student. Listening to a physician-patient discuss the development of his or her illness and treatment experiences can be an enlightening teaching exercise for all of the participants as well as for the audience. The description of the techniques and effectiveness of therapeutic communities in the treatment of the "hard-core" drug abuser cannot be taught without a successfully treated resident from that community participating in the panel session (Sacks and Levy 1979; Vaillant 1966; Bale et al. 1980). A great value of the recovery panel is that it can be used for large student groups.

Self-help Groups

AA, Al-Anon, Alateen, NA, and other self-help groups are available in almost all communities that have medical schools. These groups usually have hospital liaison members who are experienced in presenting their self-help approaches to professional audiences. Use of these self-help groups serves several purposes. Not only does it teach the medical student an alternate or, in most cases, auxiliary treatment modality for the substance abuser, but it also teaches the busy medical practitioner how to tap the available community resources for his or her patients.

Student Participation in Treatment Settings

When facilities are available, students should be assigned to a substance abuse treatment team for a period of 4 to 8 weeks or longer so that they can actively participate in therapeutic experiences. Obviously, this kind of contact can provide an invaluable learning experience, and the techniques learned are remembered for relatively longer periods of time. However, the shortcoming of this approach is that the students can participate only in small groups, and the manpower required to provide this type of learning experience for the entire medical school class is far greater than is usually available in any medical setting. Consequently, this type of experience is usually offered as an elective for those students who have a special interest in substance abuse.

Although it may be impractical to use this learning experience for an entire medical school class, a treatment team from one of the nearby substance abuse rehabilitation centers may be invited to the medical school to participate in a seminar with an entire class. In this session, they can describe their entire treatment program and use a question-and-answer forum to allow student participation.

One of the benefits resulting from these types of teaching exercises on treatment modalities is that the

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relating between the students and the recovered patients, self-help groups, and treatment teams not only enables the student to understand the substance abuser and his treatment but also helps the student to understand his own feelings about these patients.

Chapter 6
Intervention and Treatment of the Physician Disabled by Substance Abuse

Early Symptoms of Substance Abuse Among Physicians

The subject of substance abuse by physicians should be taught during the latter part of the psychiatry block of the junior year or during the senior year, after the student is familiar with the diagnosis and treatment of substance abuse.

Physicians impaired by substance abuse may delay treatment even longer than do other substance abusers, since the doctor frequently has to maintain an unrealistic appearance to the community. A physician is supposed to be strong and not get sick, particularly with alcohol or drug problems. Substance abuse may be an even more embarrassing problem for the physician than it is for the layperson. Any one of the following symptoms may be found in all physicians at some time; it is the development of a cluster of two, three, or four of these symptoms in a physician that should alert fellow doctors to the possibility of a substance abuse problem: (1) increased difficulty in social functioning with tendency toward isolation; (2) decrease in sense of humor; (3) immoderate use of alcohol or mood-altering drugs on more than one occasion; (4) increased friction with fellow physicians or impatience with nursing staff; (5) friction with patients; (6) repeated mistakes in writing orders on charts; (7) episodes of forgetfulness concerning verbal or written orders; (8) inappropriate amount of time devoted to working; and (9) inappropriate or excessive prescribing of hypnotics and stimulants.

It is important for a disabled doctor's fellow physician to discuss the concern about potential drug abuse in a private meeting with his or her peer. Although this approach may be regarded as an intrusion on privacy and the doctor may become quite defensive, it should not turn out badly if the elements of concern, a nonjudgmental approach, and honesty accompany this confrontation, as described in chapter 4. If the problem of substance abuse is not apparent to most people but the suspicion is a strong one, then a private one-to-one confrontation with the suspected physician is indicated. It may well be that there are other personal problems that are causing some of the recent changes in behavior. If so, a concerned approach should help the disabled doctor see that personal problems are interfering with the practice of medicine. If the physician does have a substance abuse problem and becomes defensive, at least he or she has been momentarily forced to take his or her head out of the ground and look at reality; this discussion may help to decrease denial during subsequent confrontations if they are necessary.

If several physicians and other staff members of the hospital are aware of the problem, a planned intervention with the help of an experienced therapist might be indicated. Of course, if the substance abuse problem is evident to a great number of people, the family members should be contacted first, since it is essential for them to be involved in the intervention process along with closest physician friends and key hospital administrative personnel. It is important to teach the medical student the steps in this process, not only to prepare the student for future interventions after graduation, but also to help him or her recognize and deal with the possibility of the same problem in a present classmate. The film, "Alcohol and Drug Abuse Among Physicians," which is described in the Annotated List of Curriculum Material, shows a physician who wishes that he had had intervention many years earlier that would have saved him and his family additional years of misery.

The Problem of Delayed Treatment of the Addicted Physician

As mentioned in chapter 3, the earlier the physician establishes a diagnosis of substance abuse, the better the prognosis. This statement holds true for the physician disabled by substance abuse as well as for any patient. Unfortunately, it is usual for fellow physicians either to avoid confrontation or to cover up the deficiencies of the addicted physician until it is too late. The unwitting destructiveness of this type of "enabler" should be stressed repeatedly, not only to the medical student but to all physicians; in our caring and concern for our fellow physician, we must provide real help through a therapeutic confrontation, not a cushion to lean on.

If intervention in the substance abuse problem does not occur until the physician's practice has been seriously hampered and he or she has been placed on probation, then the prognosis is truly dismal. The following data should be reviewed and discussed during class presentations in the junior year. Students should be given the opportunity to offer appropriate suggestions concerning the probationary and treatment steps that should be available to a physician once the case is discovered and diagnosed. In one survey of 40 Oregon physicians who had been placed on probation or were under investigation for probation (Crashaw et al. 1980), 8 had committed suicide and 2 were recovering from serious suicide attempts within the 13-month period prior to the survey. This suicide rate is approximately 500 times the expected rate in physicians, and alcohol was the main drug of abuse in this particular population. Monitored treatment was not a requirement of the probationary process in this study. In another study of addicted physicians who had not yet been placed on probation (Johnson and Connelly 1981), 64 percent were sober and doing well. Again, alcohol was the main drug of abuse in 41 percent of the cases, and alcohol in combination with other drugs in 24 percent. The other abused drugs in this study were meperidine (26 percent), pentazocine (14 percent), barbiturates and other hypnotics (14 percent), and amphetamines (6 percent). The most common motivating factor for treatment was job-related pressure, followed by family pressure. In another extensive evaluation of physicians' lives, Vaillant and his colleagues (1966) found that alcohol abuse once again was the most prominent cause of dysfunction. These data emphasize the importance of teaching the student to attempt to reach a fellow physician early during the course of the substance abuse illness.

The medical student should also learn that the relatively high incidence of substance abuse among U.S. physicians is not unique. Among British physicians, the substance abuse problem is just as serious and perhaps has an even more pessimistic outlook because of less education about substance abuse and a lack of organized treatment efforts concerned with early intervention of addicted physicians (Murray 1976*a*; Murray 1976*b*; Alcohol dependent doctors 1979). In one survey by Murray (1976*b*), only 8 of 41 physicians were practicing medicine satisfactorily after having been treated for the medical and psychologic consequences of alcoholism. This particular patient population was described as having reached an advanced stage of alcoholism before receiving treatment. The same author, in a survey of alcoholism among doctors in Scotland, found the incidence to be more than 2½ times higher in this group than among their nonmedical socioeconomic peers. However, Murray ended his

survey on an optimistic note, stating that adequate education about alcoholism may help to lower the incidence in physicians. He cited the significant decrease in smoking and the associated reduction of lung cancer in physicians, a decrease of nearly 50 percent by 1976, as partially owing to the knowledge of the association between bronchial carcinoma and smoking.

Successful Treatment of the Physician With Substance Abuse

Despite a physician's difficulty in making the transition to being a patient, particularly in substance abuse programs, treatment of the addicted physician has been associated with encouraging success rates (Johnson and Connelly 1981; Goby et al. 1979; Kliner et al. 1980). In a followup (Goby et al. 1979) of 51 physicians who were experiencing symptoms severe enough to warrant admission to an inpatient rehabilitation unit, two-thirds were totally abstinent for a mean of 42 months, findings quite similar to those reported by Johnson and Connelly (1981). In a 12-month followup (Kliner et al. 1980) of 75 physicians who had been treated on another alcohol rehabilitation unit, three-fourths were abstinent and reported improvement in their professional performances, personal adjustment, physical health, and self-image. In this study, the therapeutic success rate in physicians (76 percent) was higher than in general patients who had been treated in the same program (61 percent). This type of success rate may enable the medical student to develop an optimistic attitude about substance abuse treatment as well as increase self-referrals of physicians. Awareness of this relatively high success rate may also prompt early intervention and confrontation with the addicted physician by fellow doctors. The earlier the intervention, the better the prognosis, because the patient is likely to have more to lose (family, hospital affiliation, medical licensure, and so forth) in the early or middle phase of the substance abuse problem.

A consideration of compulsory treatment of the addicted physician and compulsory treatment of other types of substance abusers should be included in the class discussion at this time. One good question for group discussion is "If substance abuse can be proved in the disabled physician, should compulsory treatment then be instituted if he or she refuses voluntary help?" Data concerning the New York State Medical Society guidelines for treatment should be introduced. New York State has two treatment tracks for the impaired physician: a voluntary program and a compulsory program (Physicians' Committee: Special Report 1975). The voluntary system has no records, has no statutory power, and exists to encourage self-referral by the addicted physician. Under the compulsory system, the disabled doctor can be suspended if he or she does not accept monitored therapy.

Some additional opinions that should provide material for interesting class discussion are as follows. Any probation or medical license suspension of the addicted physician should also include monitored therapy as one of the requirements in order to avoid the disastrous results of the Oregon study (Crashaw et al. 1980). Compulsory treatment may work if the coercion

is continued long enough for the patient to work out the initial anger about being forced to seek treatment (Physicians' Committee: Special Report 1975). In addition, the probation or suspension of medical licensure should be no longer than 6 months in order to avoid an atmosphere of indefinite waiting and hopelessness.

Chapter 7
Diagnosis and Treatment of Substance-Induced Organic Mental Disorders

Diagnosis of Substance-Induced Organic Disorders

Since the diagnosis of substance-induced organic mental disorders implies a pessimistic prognosis, it is absolutely essential to demonstrate to the medical students that many of these patients can function quite adequately in their jobs despite some permanent mental impairment. As a certain amount of medical and psychologic sophistication is required for understanding this problem, this subject should not be reviewed prior to the end of the junior psychiatry block or during the senior year. Interviews with these patients should be conducted or films of interviews should be presented to show the student how such patients can function. For example, an attorney with permanent alcohol-induced brain damage may function quite well with the support of an alcoholism treatment program. He has to keep daily notes of appointment times, phone calls, and so on, but still retains an extensive knowledge of the law and can handle a civil case more adequately than some younger lawyers who never drank. This type of patient is ideal for interviewing in front of a junior or senior class.

The ability of alcohol to induce semipermanent or permanent organic mental changes in relatively young individuals has been well documented (Lee et al. 1979). The relationship betwen total dosage of alcohol and degree of cognitive deficit is disputed, although the mean age was only 37 years in a negative study by Grant and his colleagues (Kroll et al. 1980; Grant et al. 1979).

Interviews of organically impaired patients should demonstrate for the student the early warning signs of cerebral organicity. Including the patient's family in these interviews can help to elucidate the impending signs and symptoms of organic mental changes, present a better picture of the progress of this illness, and indicate the point at which therapeutic intervention should have occurred. At times, routine psychologic testing will not detect the early organic mental changes. More discrete testing (e.g., Halstead Category Subtest) will show impairment on the more demanding tests, even though alcoholics who have not volunteered memory complaints may not differ from controls on standard clinical testing. At this time, a review of an interesting paper by Goodwin and colleagues (1979), "Psychiatric Symptoms in Disliked Medical Patients," is quite relevant. This study showed that a physician's dislike of a patient may be prompted by the patient's inappropriate anxiety or hostility resulting from cerebral impairment. Of 22 patients with lupus erythematosus, physician dislike was significantly correlated with the patient's degree of organic brain damage. Being aware of these negative feelings and of the fact that organic brain damage increases the negative interaction may help decrease the physician's anger.

The relative frequency of substance-induced brain damage was demonstrated in a survey of 80 randomly chosen patients with organic brain damage diagnoses in a Veterans Administration hospital (Selzer and Sherwin 1978). Twenty-seven percent of these patients had alcohol dementia or alcohol-induced Korsakoff's and 22 percent had Alzheimer's. The student should be aware of the relatively high frequency of alcohol-induced organic changes and understand that the prognosis may be optimistic since recovery of cognitive skills has been reported with abstinence (Hester 1979). Organic cerebral impairment has also been observed following benzodiazepine administration, but has not been reported with narcotic use (Hendler et al. 1980).

Dementia Associated With Alcoholism and Other Drugs

The differential diagnostic problems of Alzheimer's, Alcohol Amnestic Disorder (Korsakoff's), and subdural hematoma should be reviewed for the student. It should be emphasized that, if the patient with alcohol dementia is able to maintain abstinence, it is not unusual to see improvement occurring as late as 6 to 12 months after the patient has initiated sobriety (Gallant in press). The same observations are valid for the Alcohol Amnestic Disorder (includes Korsakoff's Syndrome), which is a more circumscribed illness, structurally and functionally, and less incapacitating because the remaining intellectual functions are relatively intact except for the recent memory changes.

The student must be aware that it is essential to accurately recognize Wernicke's encephalopathy, a diagnosis that is frequently made too late and confronted at autopsy (Harper 1979). One major recommendation resulting from the data of a study by Harper (1979), in which only 7 of 51 patients were diagnosed prior to death, is the routine use of large dosages of prophylactic thiamine in alcoholic patients, particularly those with evidence of cerebral damage (Gallant in press; Harper 1979).

Treatment of the Organic Disorders

It is noteworthy that approximately 35 to 58 percent of alcoholics in different treatment rehabilitation settings showed demonstrable neuropsychologic impairment on the Halstead-Reitan Category Subtest, Block Design Test of Wechsler, and Wisconsin Scoring Test (Gallant in press). The degree of impairment appears to be associated with the duration of drinking history (Parsons 1977; Smith et al. 1973; Lusins et al. 1980).

The student should learn that the help of the neuropsychologist can be invaluable in assessing the nature and degree of cerebral impairment. An adequate evaluation helps to establish realistic guidelines and goals for the patient, thus avoiding early failure in treatment. An essential part of the treatment of the organic mental disorder is helping the patient and the family to recognize the problem and meaning of alcohol-induced damage. It is important for the patient and the family to realize that many of the organic mental changes are reversible with time, abstinence, and good nutrition. Episodes of organic agitation can sometimes be modified with propanol without having to resort to the use of neuroleptics or sedative anxiolytics (Petrie and Ban 1981). Caring for the brain-damaged patient at home can result in psychologic and social problems for the family; group meetings with other such families can instill optimism and decrease feelings of isolation. It is essential to offer these families (as well as the student) an optimistic viewpoint and appropriate instructions on how to manage the patient's daily behavior while waiting for some of the organic symptoms to resolve.

Brief daily training sessions that concentrate on visual-motor coordination with appropriate eye-hand exercises, attention-span sessions not lasting more than 20 minutes, and abstract thinking tasks should be conducted. These training sessions should include creating three-dimensional figures and abstracting from categories. The use of mnemonics can be helpful for memory training sessions.

The medical student should learn that instruction about these techniques and teaching the development of routine habits require only a minimum amount of time but can result in encouraging warm responses from the family. The development of routine living habits can be quite helpful: awake at the same time every day, eat meals at the same time, and stay on the same daily schedule including sleep time. In addition, the patient should be encouraged to keep a notebook containing the time of appointments for that day, time for planned phone calls, time for other types of social engagements, and work schedule. The patient uses these notes to compensate for the short-term memory deficit, which is the major problem in most patients with alcohol-induced brain damage. It is essential to emphasize to the patient and the family that the prognosis can be quite good in a significant number of substance-induced brain-damaged cases.

Chapter 8
Prevention of Substance Abuse Within a Community

Teaching medical students about their future responsibilities to the community in which they will practice medicine is one of the most important goals of good medical education. No matter which specialty of medicine they chose, the future physicians will be confronted again and again by substance abuse and its effects. The prevention of substance abuse will be their responsibility as physicians. Primary prevention, it should be stressed, may be more important than secondary or tertiary prevention.

Primary Prevention

The goal of primary prevention is to stop the occurrence of substance abuse or chemical dependency. The subject of prevention may not be a very exciting one for presentation to the senior students, who have been exposed to all types of medical and surgical emergencies during the first 3 years of medical school. Yet, the subject of primary prevention is very important in terms of helping the most patients with the least cost in money and personnel. Primary prevention should be taught during the senior year, because the student needs a certain amount of didactic and experiential material, as well as some degree of sophistication, to appreciate the importance of this subject. Since the departments of psychiatry in most medical schools do not have compulsory clerkships during the senior year, collaborative lectures with departments of community medicine or family practice may offer the best opportunity for presentation of this subject.

Legal Approaches

An outstanding success in primary prevention of substance abuse is detailed by Treffert and Joranson (1981) in a three-page report. This article describes the process of identifying the problem, educating the public (politicians, professional personnel, and laypersons) through media coverage and symposia, followed by the establishment of restrictive guidelines for prescribing drugs that have the potential for abuse, particularly Schedule II drugs. After the Wisconsin Medical Examining Board defined as unprofessional conduct "the prescription or dispensing of amphetamines for any purpose other than five limited clinical indications and one research use," the average monthly doses sold by one major distributor decreased from 27,000 to 700 within 12 months, a reduction of 97 percent. Other distributors in the State reported similar trends. The Wisconsin board did permit investigation of amphetamines for other purposes, but only after approval of a research protocol. In association with this dramatic decrease in amphetamine sales, amphetamine-related arrests decreased by 75 percent within the same period, without a resultant increase or diversion to Schedule III or Schedule IV stimulants, which can induce anorexia.

A brief description of the failure of legalization of stimulant use in the "Swedish Experiment" provides additional practical advice for governmental policy (Hofmann 1977). Popham's excellent review (1976) of the effects of legal restraints and taxation on the incidence of alcoholism and alcohol-related morbidity and mortality is worthy of at least one seminar. Cook's survey of the effects of liquor taxes in the United States (in press) is another good article for presentation at this point. This report demonstrates that increases in the tax rate on alcohol beverages reduce both alcohol-related auto fatality rates and cirrhosis mortality rates. As Wageman and Douglass have reported (1980), the correlation between raising the legal drinking age and the reduction in alcohol-related

motor vehicle crashes should be emphasized. The discussion of this evaluation of the effects of legal driving age upon frequency of auto accidents in Michigan can be accompanied by reference to the Ontario, Canada, study (Smart 1976). Using Smart's book as a reference, the faculty member can summarize the relationship between lowering the legal drinking age and frequency of alcohol use by high school students, increase in percentage of arrests for drunkenness, and adolescent drinking-driving accidents and fatalities. The question "How responsible should the government be in setting public health policies (legislation and taxation) to protect the lives of its citizens, provided that the data in the cited references is valid?" can stimulate an interesting discussion. The physician of the future will have to take a more active community role in the area of public health as the overwhelming importance of primary prevention becomes increasingly recognized.

Educational Approaches

By the senior year, the medical student has been exposed to the psychologic mechanisms of, the influence of cultural attitudes on, and the genetic predisposition toward substance abuse, as well as to its psychologic consequences. Now, a discussion of the physician's responsibility for educating the community should be included in the substance abuse curriculum. The medical student has to realize that sustained public educational campaigns on substance abuse are required in order to initiate appropriate legislation. It should be taught that alcoholism, like any drug of potential abuse, is more than a medical problem. However, it is the responsibility of the medical profession to educate and help contribute to changes in legislation that will lower the substance abuse morbidity and death rate.

Education about substance abuse should begin in the early years of grammar schol. Many of the subjects that children learn in school may be less important than advice about drugs of misuse and ways of avoiding such drugs.

Educational and community legislative efforts can have some impact on student preference for substances that can be abused. In one study, a combination of expected legal sanctions and peer disapproval was a strong deterrent in 91 percent of the nondrinkers of whom 69 percent feared legal sanctions and 81 percent feared peer disapproval (Burkett and Carrithers 1980).

Continued approaches to the media for help in advertising new side effects or toxicity data about abuse of specific substances can help keep the public aware of new developments and, in a few cases, may help to penetrate the denial mechanism of substance abusers and to deter naive users. The combined effects of smoking and drinking on perinatal morbidity and mortality and in inducing sperm abnormalities should be widely publicized (Fabre and Joiette 1980; Evans et al. 1981). Misleading information about advertised decreases in tar and nicotine levels of cigarettes should be corrected by public education efforts directed particularly toward the adolescent population (Kozlowski et al. 1980). Occasional group discussions about the "legal drugs" conducted in high school settings by physicians can be interesting for the doctor as well as for the children.

In community medicine, a presentation of how smoking can effect the carbon monoxide level of nearby nonsmokers and the rights of nonsmokers in social circumstances can lead to stimulating discussions (Kozlowski 1980). During this discussion, the effects of other socially acceptable "benign" drugs, such as caffeine, should also be reviewed (White et al. 1980).

Secondary Prevention

Medical Aspects

The primary emphasis of secondary prevention of substance abuse is early casefinding. As detailed in chapter 3, the student should learn the early symptoms and signs of substance abuse. The articles by Dubach and Schneider (1980), Morse and Heest (1979), and Israel and colleagues (1980) and appendices A, B, and C provide useful resource material for detecting the early phases of substance abuse. If the physician is alert to the early signs and symptoms, he or she may have the opportunity to intervene while the patient's social support system is still intact. The students should be encouraged to routinely use screening questionnaires, such as the questions in appendix B–1 or the MAST in appendix B–2, when they are working in hospital emergency rooms or in outpatient clinics.

The consideration of family problems that result from substance abuse should emphasize the likelihood of the presence of substance abuse in families with a history of child abuse, spouse battering, or other types of extreme violence (Baehling 1979; Alcoholism cited in domestic violence cases 1980; Gershon 1978; Johnson et al. 1978). Future primary care physicians, such as pediatricians, family practitioners, and obstetricians, have to learn that treatment only of the end result of a substance abuse problem (e.g., medical management of a battered child or spouse) is totally inadequate. Identification of the offender and assurance that this person receives followup treatment in order to avoid future violent occurrences is the moral responsibility of the physician. The student must learn this attitude and ethical concept before graduation from medical school.

Data such as that published by Rosett and his colleagues (1980) reinforce the importance of secondary prevention or early casefinding. As a consequence of significantly reducing the alcohol intake in 25 pregnant women who drank heavily, there was less growth retardation among their offspring at birth than among the offspring of 44 women who continued to drink heavily. Thus, early casefinding in pregnant alcoholic women can serve as primary prevention for low infant birth weight and possible subsequent impaired motor and mental development (Streissguth et al. 1980).

Routine screening for alcoholism in emergency rooms will reach a significant number of alcoholic patients who present with other complaints: 63 percent with trauma and 23 percent with vague neuropsychiatric complaints in one study (Rund et al. 1981). The student should be constantly aware of the substance abuse problem if he or she is to later determine an adequate treatment followup strategy for every patient seen in the emergency room or clinic.

Secondary prevention is also important for the geriatric population. In this patient group, certain signs and symptoms such as repeated falls, episodic confusion, and self-neglect may be indicators of underlying drinking problems. It is not unusual for some patients to start abusing alcohol late in life (Wattis 1981). In some cases, close relatives who abuse alcohol themselves may be enabling the elderly patient to drink.

At the other end of the chronological continuum, the incidence of alcohol abuse and misuse appears to be increasing among the young. The Adolescent Alcohol Involvement Scale (AAIS) is a practical learning tool for the medical student to use in defining alcohol misuse and alcoholism-like illnesses in the adolescent population (Mayer and Filstead 1979). This scale can also be an evaluation tool for future pediatricians or physicians interested in adolescent medicine, since the scale can measure the degree of alcohol misuse in a community school. In association with this scale,

Kandel's study on the stages of adolescent drug use (1975) may help the community-oriented physician to predict the degree of drug misuse or illegal drug use in the local high school population. The tremendous influence of adolescent peer relationships on drug use is stressed in the latter article. Another interesting reference article for class discussion is "Drugs and the Class of '78" (Johnston et al. 1980). This extensive review of substance abuse in 125 public and private schools shows the degree of drug use and indicates the importance of peer impact upon the adolescent's decision whether or not to use substances of abuse. In all of these cases of adolescent drug use, secondary prevention has to be concerned with early identification of the problems; education of the parents, peers, and school system; and the need to have available abstinent peer groups for the drug abuser to turn to when asked to give up former "drug-taking" friends.

It is also important for the physician to be aware that some patient populations may have a high percentage of substance abusers; thus, a higher index of suspicion for the problem should be present when treating such populations. For example, even after controlling for sex, age, income, education, and marital status, veterans over 35 years of age who were less educated and had a lower incidence of marriage showed a significantly higher prevalence of alcohol abuse than nonveterans from similar backgrounds (Boscarino 1979). This is valuable information for the medical student, particularly those who may be entering the armed services or planning postgraduate training in Veterans Administration hospitals.

Legal Aspects

Screening the driving records of persons convicted of driving while intoxicated (DWI) is one legal approach for detecting early cases of alcohol and drug abuse and preventing future problems (Maisto et al. 1979). These simple data, which are available in most communities, can have important therapeutic implications in regard to early prevention. The average timespan between DWI convictions progressively decreases with each conviction, increasing the likelihood of a disastrous car accident (Maisto et al. 1979). Compulsory treatment of such traffic violators may be helpful in some cases, if the duration of sentence is long enough to work out the subject's initial anger over being forced to accept therapy and if the court sentence provides harsh penalties for noncompliance (Gallant et al. 1968; Inge 1979). Screening questionnaires and tests (described in chapters 2 and 3) are available for use in courts and related social agencies, such as probation units (Hoffman et al. 1974; Goldstein and Sappington 1977; Dubach and Schneider 1980; Morse and Heest 1979; Woodruff et al. 1976). These screening efforts could also be utilized in child abuse cases, spouse beatings, and other possible court-related substance abuse problems. This type of early casefinding within the legal system can be quite productive, since it is likely that the court will have the legal power to incorporate treatment into its recommendations. A visit by the senior student group to one of the municipal night courts will provide an excellent learning experience about the impact of alcohol and drug abuse on the legal system.

Tertiary Prevention

Tertiary prevention refers to treatment and rehabilitation of patients seeking help for substance abuse complications. This subject has been covered in chapters 3, 4, 5, and 7.

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Appendix A
Hazards of the Health Profession

Those physicians who become seriously ill or die prematurely from such disorders as suicide, hypertension, cancer, coronary occlusion, and mental illness have had significantly different personality characteristics in youth from their healthy classmates (see Manber 1979 in References). If a medical student or resident has two or more of the following symptoms, then he/she should be aware of future susceptibility to substance misuse impairment.

For medical students: Failure in any area of medical education; difficulty in social functioning; failure to find humor in one's role as a medical student; regular use of mood-altering drugs; immoderate use of alcohol; family history of alcoholism; irregular or inconsistent class attendance or grades; friction with a professor.

For residents: Repeated intellectual errors; numerous mistakes in writing charts and so on; friction with personnel or patients; inappropriate amount of time devoted to studies, work, or socializing; unusual social or financial problems; more than one change of career choice during a 3-year residency; avoidance of private practice experience; avoidance of thorough training in the intended area of specialization; avoidance of a particular area of training during the internship or residency; more than an occasional use of alcohol or mood-altering drugs.

There are many theoretical explanations for the high incidence of emotional disorders among physicians. One concept is that many persons who choose medicine as a career are achievement- and endurance-oriented but may have relatively little spontaneous creativity or flexibility. Thus, this type of individual may be well rewarded in medical school but quite frustrated in the unstructured world of clinical medicine, with resultant difficulties in coping.

To decrease these problems, it is recommended that medical schools as well as continuing education programs emphasize the dangers of drug and alcohol abuse, the destructive nature of overwork, the need for continuing self-inspection and self-awareness, the importance of developing interests outside medicine, and the need to devote a considerable amount of time to family life. It is important to note that physicians' own estimates of their problems with drugs and alcohol are much lower than those developed through independent research. As many as 6 to 8 percent of all physicians will have a drinking problem at sometime in their lives, and about 1 or 2 percent of all physicians will abuse drugs.

Appendix B-1
Diagnostic Questions for Early or Advanced Alcoholism

Self-examination should be part of the drinking person's routine, and every effort should be made to be as candid with oneself as possible. Examples of questions that could be indicative of a pre-alcoholic situation are:

1. Do I get drunk when I intended to stay sober?

This question speaks to early loss of control over one's drinking. The inability to stop, once drinking has commenced, is an ominous sign. *Even an occasional loss of control may be a warning signal.*

2. When things get rough, do I need a drink or two to quiet my nerves?

Using alcohol as a tranquilizer can be precarious because the dose is difficult to adjust, and no other person is supervising the medication.

3. Do other people say I'm drinking too much?

If the negative effects of drinking are evident to more than one person or to a single person on a number of occasions, this means that one's behavior is exceeding the social limits. It would be well to listen to such comments, remembering that most people are usually reluctant to talk about the drinking troubles of their friends and relatives.

4. Have I ever had a "DWI" (driving while intoxicated) charge?

Being arrested even once means that one has a 50 percent chance of already having a drinking problem.

5. Is it not possible for me to stop drinking for a month or more?

Resolving to stop and not being able to carry it off would indicate a definite psychological or physical dependence and reflects a serious future outlook. Being able to stop is encouraging, but does not eliminate the possibility of binge or other types of destructive drinking. It is not being able to stop that is indicative of a dangerous situation.

6. Do I sometimes not remember what happened during a drinking episode?

Blackouts due to alcohol consist of variable periods of *amnesia* for what happened during the drinking bout. They are to be differentiated from passing out into unconsciousness, which is the end state of intoxication. Blackouts strongly suggest the problem of alcoholism. Passing out is an unfavorable sign.

7. Has a doctor ever said that my drinking was impairing my health?

By the time a medical examination reveals abnormalities attributable to alcohol, it is clear that continuing to drink as previously will seriously damage one's health. Abnormalities of amino acid ratios, plasma lipoproteins, or hepatic enzymes are signals that too much ethanol is being ingested for the liver to cope with.

8. Do I take a few drinks before going to a social gathering in case there won't be much to drink?

Assuring oneself of a sufficient supply of alcohol, just in case, is evidence of an unhealthy preoccupation with such beverages and speaks for a need to feel "loaded" on social occasions and of the presence of a drinking problem.

9. Am I impatient while awaiting my drink to be served?

The urgency to obtain a drink reflects a craving. Gulping drinks is another sign of overinvolvement with alcohol.

10. Have I tried to cut down but failed?

As with the inability to stop drinking for periods of time, the inability to cut down is a warning that dependence is present or impending. Cutting down successfully but eventually slipping back up is another sign of possible future trouble.

11. Do I have to have a drink in the morning because I feel queasy or have the shakes?

The relief obtained from a drink after arising is apparently the relief of early, mild withdrawal symptoms. Therefore, a degree of physical dependence is already present, and this symptom suggests that alcoholism is now a severe problem.

12. Can I hold my liquor better than other people?

Being able to hold one's liquor is not necessarily evidence of manliness or freedom from complications of drinking. It may indicate the development of tolerance due to the persistent consumption of large quantities. Although social disabilities may be avoided by holding one's liquor, physical impairment due to the amount consumed is inevitable.

13. Have many members of my family been alcoholics?

There seems to be a genetic component to some instances of alcoholism. People whose parents or siblings had serious problems with alcohol have reason to be extra careful of drinking habits.

The 13 indicatives mentioned above are early or somewhat advanced signs of alcoholism. They should be assessed seriously by the individual concerned or by the health professional who is evaluating him or her. The recognition that a threat to one's future exists is a first step. The second step is taking realistic action on the basis of the threat. The third step is sustaining the new behavior. These steps are the critical blocks to altering the course of destructive drinking: refusal to accept the information, refusal to do anything about it, and refusal to maintain a corrective course of action.

If any 2 of these 13 indicators are present, the problem drinker and the family should seek immediate help and guidance from AA and Al-Anon as well as the nearest available alcoholism treatment clinic.

Appendix B-2
Michigan Alcohol Screening Test (MAST)

Points	Questions
(0)	1. Do you enjoy a drink now and then?
(2)	2. Do you feel you are a normal drinker?*
(2)	3. Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening before?
(1)	4. Does your spouse (or parents) ever worry or complain about your drinking?
(2)	5. Can you stop drinking without a struggle after one or two drinks?*
(1)	6. Do you ever feel bad about your drinking?
(2)	7. Do friends and relatives think you are a normal drinker?*
(0)	8. Do you ever try to limit your drinking to certain times of the day or to certain places?
(2)	9. Are you always able to stop drinking when you want to?*
X(4)	10. Have you ever attended a meeting of Alcoholics Anonymous (AA)?
(1)	11. Have you gotten into fights when drinking?
(2)	12. Has drinking ever created problems with you and your spouse?
(2)	13. Has your spouse (or other family member) ever gone to anyone for help about your drinking?
(2)	14. Have you ever lost friends or girl/boy friends because of drinking?
(2)	15. Have you ever gotten into trouble at work because of drinking?
(2)	16. Have you ever lost a job because of drinking?
(2)	17. Have you ever neglected your obligations, your family, or your work for 2 or more days because you were drinking?
(1)	18. Do you ever drink before noon?
(2)	19. Have you ever been told you have liver trouble? Cirrhosis?
(2)	20. Have you ever had delirium tremens (DTs), severe shaking, heard voices or seen things that weren't there after heavy drinking?
(4)	21. Have you ever gone to anyone for help about your drinking?
(4)	22. Have you ever been in a hospital because of drinking?

Points	Questions
(0)	23. (a) Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital?
X(2)	(b) Was drinking part of the problem that resulted in hospitalization?
(0)	24. (a) Have you ever been seen at a psychiatric or mental health clinic, or gone to any doctor, social worker, or clergyman for help with an emotional problem?
X(2)	(b) Was drinking part of the problem?
(2)	25. Have you ever been arrested, even for a few hours, because of drunk behavior?
(2)	26. Have you ever been arrested for drunk driving after drinking?

*Negative responses are "alcoholic" responses.

A total of 4 or more points is presumptive evidence of alcoholism, while a 5-point total would make it extremely unlikely that the individual was not alcoholic. However, a positive response to 10, 23, or 24 would be diagnostic; a positive response indicates alcoholism.

Appendix D

Table 1. Checklist: A Summary of the Interview Behavior

Behavior:

Yes	No	
___	___	Friendly
___	___	Intoxicated
___	___	Hyperactive
___	___	Inactive
___	___	Alert
___	___	Initiates conversation
___	___	Nervous
___	___	Manipulative
___	___	Seductive
___	___	Directs the interview
___	___	Evasive
___	___	Suspicious
___	___	Believable
___	___	Cooperative
___	___	Behavior appropriate to interview situation

Thought disorder:

Yes	No	
___	___	Does he/she make sense?
___	___	Is he/she thinking straight?
___	___	Can you follow him/her?
___	___	Does he/she answer questions appropriately?
___	___	Is the patient scared?
___	___	Does he/she scare you?

Sensorium orientation: Is the patient oriented to:*

Yes	No	
___	___	Time?
___	___	Place?
___	___	Person?
___	___	Situation?

*If all, or almost almost all, answers are "no," then further psychological evaluation may be indicated.

Table 2. Cutaneous Signs of Alcohol and Drug Abuse

Direct Sequelae		Indirect Sequelae	
Local	Systemic	Other stigmata	Medical problems
Skin tracks	Fixed drug eruption	Excoriations	Jaundice
Pop scars	Eyelid edema	Acne excoriee	Pigmentary problems
Abscess	Urticaria	Self-induced tattoos	Pseudo acanthosis nigricans
Ulceration	Purpura	Wrist scars	Bullous impetigo
Infection	Pruritus	Tourniquet pigmentation	Cheilitis
Sphaceloderma			Contact dermatitis
Hand edema			Cigarette burns
Thrombophlebitis			Dental disorders
Camptodactyly			
Shooting tattoo			
Bullae			
Perforated septum			
Acne rosacea			
Spider nevi			
Palmar erythema			
Porphyria cutaneous tarda			

Table 3. Stimulant Intoxication and Overdose

Signs, Symptoms, and Diagnostic Aids

Signs	Symptoms	Diagnostic Aids
Most common:	**Most common:**	Blood or urine levels of amphetamine or cocaine
Tachycardia	Anorexia	
Hyperpyrexia	Euphoria	
Diaphoresis	Irritability	
Dilated pupils	Manic affect	
Hypertension	Paresthesia	
Dry mouth	Restlessness	
Tremor	Insomnia	
Hyperactivity	Labile affect	
In higher doses:	**In higher doses or after prolonged use:**	
Delirium	Auditory, visual, and sometimes tactile hallucinations	
Seizures followed by coma	Paranoid ideation or psychosis	
Hyperactivity	Stereotyped activity	

Table 4. Stimulant Withdrawal

Signs, Symptoms, and Diagnostic Aids

Signs	Symptoms	Diagnostic Aids
Psychomotor retardation	General fatigue	Abnormal sleep EEGs
Nasal congestion [1]	Apathy	Urine screen for cocaine or amphetamines
	Agitation	
	Depression [2]	Depression scales
	Generalized aches	
	Hyperphagia	
	Hypersomnia	

[1] In withdrawal from cocaine when taken by insufflation (snorting).

[2] Because these symptoms also may be present in primary depression, careful clinical evaluation of the psychopathologic conditions present before the use of stimulants is important.

Table 5. Hallucinogen Intoxication

Signs, Symptoms, and Diagnostic Aids

Signs	Symptoms	Diagnostic Aids
Dilated pupils	**Low to moderate doses:**	None is widely available. Some laboratories can do urine or blood levels. GC with a nitrogen detector or GC–MS instruments are required for those drugs that can produce behavioral changes at blood levels less than 100 ng/ml.
Hypertension	Anxiety	
Hyperreflexia	Visual distortions	
Tremor	Hallucinations	
Hyperpyrexia	Changes in body image	
Tachycardia	Labile affect	
Facial flush	Paresthesia	
Conjunctival injection (marijuana)	Synethesias[1]	
	Time-space distortions	
In higher doses:	Rambling speech	
Toxic psychosis	Easy suggestibility	
Seizures (rare)	Anorexia	
Depersonalization		
Paranoid ideation	**In higher doses:**	
	Acute panic reactions (not necessarily dose related)	

[1] The patient may complain of "feeling sounds" or "hearing colors."

Table 6. Phencyclidine (PCP, Angeldust) Intoxication and Overdose

Signs, Symptoms, and Diagnostic Aids

Signs	Symptoms	Diagnostic Aids
Low doses: Dysarthria Horizontal and vertical nystagmus Gait ataxia Tachycardia Increased deep tendon reflexes **Higher doses and overdose:** Blank stare Facial grimaces Hypertension Muscle rigidity, spasms Seizures "Eyes open" coma, levels of consciousness may fluctuate Drooling	**Low to moderate doses:** Hyperacusis A floating feeling Aggressiveness Euphoria Analgesia Body distortions Nausea Feelings of great strength Amnesia **Higher doses:** Inability to speak Labile affect Vomiting Psychotic reactions, delirium, schizophreniform psychosis Paranoid delusions Hallucinations	Blood and urine levels of phencyclidine. Either GC apparatus with a nitrogen detector or GC–MS is required for detection of blood or urine levels in the low nanogram range. Otherwise, false laboratory negatives can confuse the diagnosis. Test may be positive for a week after the last dose.

Table 7. Hypnosedative Intoxication and Overdose

Signs, Symptoms, and Diagnostic Aids

Signs	Symptoms	Diagnostic Aids
Low doses:	**Low doses:**	Blood or urine levels of depressant drugs
Horizontal and, less frequently, vertical nystagmus	Dizziness	EEC-nonspecific depressant effect
Dysarthria	Paradoxical excitement or violence	
Ataxia	Confusion	
Depressed respiratory rate	Lethargy, drowsiness	
Hypotension	Clumsiness	
Depressed deep tendon reflexes	**Higher doses:**	
Stupor	Irritability	
Hypotonia	General sluggishness	
Dysmetria	Inability to concentrate	
Higher doses and overdoses:		
Coma		
Shock		
Respiratory arrest		
Pupils may be slightly constricted[1] or unchanged		

[1] Except for glutethimide (Doriden), which may present with dilated pupils or anisocoria.

Table 8. Hypnosedative Withdrawal[1]

Signs, Symptoms, and Diagnostic Aids

Signs	Symptoms	Diagnostic Aids
Most common:	**Most common:**	EEG showing bursts of spiked high amplitude slow waves in nonepileptics[2]
Fever	Anxiety	
Postural hypotension	Abnominal cramps	
Diaphoresis	Anorexia	
Tremors	Irritability	
Flushed face	Sleeplessness	
Delirium	Nightmares	
In severe cases:	**In severe cases:**	
Seizures	Gross confusion	
	Hallucinations	
	Shock	

[1] Once physical dependence on barbiturates is established, abruptly stopping the drug produces a withdrawal syndrome similar to those for all barbiturates and sedative-hypnotics. The term "depressant withdrawal syndrome" is thus preferred by some authors. The severity of withdrawal depends on the amount and pattern of use and the individual physiological differences of the user. Duration of time between cessation of depressant medication and appearance of withdrawal symptoms is related to the half-life of the drug. Alcohol-related withdrawal symptoms usually appear during the first 2 days after withdrawal, but benzodiazepine withdrawal symptoms may not develop until 5 to 7 days after medication is discontinued.

[2] The EEG is of limited diagnostic value within 2 weeks after seizure activity or during drug intoxication.

Table 9. Opiate Intoxication and Overdose

Signs, Symptoms, and Diagnostic Aids

Signs	Symptoms	Diagnostic Aids
Most common:	**Low doses:**	Naloxone (Narcan) reverses signs and symptoms of overdose and intoxication
Miosis[1]	Euphoria	Blood or urine levels of opiates
Higher doses:	Floating feeling	
Nodding[2]	Sleepiness	
Hypotension	Anxiety	
Hypothermia		
Depressed respirations		
Shock		
Needle marks, tracks		
Cyanosis		
Tachycardia		
Overdoses:		
Pulmonary edema		
Coma		
Apnea		

[1] With meperidine (Demerol) the pupils may sometimes be dilated.
[2] The head falls to chest and jerks back several times each minute.

Table 10. Opiate Withdrawal

Signs, Symptoms, and Diagnostic Aids

Signs	Symptoms[1]	Diagnostic Aids
Mild withdrawal:	Nausea, anorexia	Signs and symptoms are precipitated or intensified by naloxone (Narcan) injection
Yawning	Anxiety	
Dilated pupils	Insomnia (except for REM sleep)	Urine tests for opiates or quinine, which may be present 24 to 48 hours after last dose
In more severe cases:	Abdominal cramps	
Vomiting	Pain in muscles and bones	
Diarrhea	Leg spasms (kicking the habit)	
Piloerection (gooseflesh)	Irritability	
Rhinorrhea	Restlessness	
Lacrimation	Craving for opiates	
Elevation in pulse rate and blood pressure	Spontaneous ejaculation	

[1] Symptoms usually begin 6 to 12 hours after last use and can last 72 hours or longer depending on the duration of action of the drug used. Methadone withdrawal symptoms develop 12 to 24 hours after last dose and are generally less intense but more prolonged. Withdrawal from Darvon is mild, with onset 6 to 12 hours following last dose. However, withdrawal convulsions have been reported to occur in more severe cases of Darvon withdrawal. Certain symptoms can last for several months and are called the "protracted abstinence syndrome."

Table 11. Drug Signs and Symptoms

Signs and Symptoms	Withdrawal				Intoxication						Overdose					
	Alcohol	Stimulants	Depressants	Opiates	Alcohol	Stimulants	Depressants	Opiates	Hallucinogens	Phencyclidine	Alcohol	Stimulants	Depressants	Opiates	Hallucinogens	Phencyclidine
Abdominal cramps			●	●											●	
Aches, muscle	●			●			●									
Affect, labile					●	●			●	●						●
Analgesia (pinprick)										●	●	●	●	●		●
Angina												●				
Anorexia	●		●	●	●	●	●		●	●		●			●	
Anxiety	●		●	●	●	●	●	●	●			●			●	●
Arrhythmia						●						●				
Ataxia					●		●			●			●	●		●
Body image changes									●	●		●			●	●
Chest pain												●				
Chills				●												
Circulatory collapse			●											●	●	
Coma											●		●	●		●
Comprehension slow	●	●			●		●	●		●	●		●	●		●
Convulsions	●	●					●					●				●

Table 11. Drug Signs and Symptoms—Continued

Signs and Symptoms	Withdrawal				Intoxication						Overdose					
	Alcohol	Stimulants	Depressants	Opiates	Alcohol	Stimulants	Depressants	Opiates	Hallucinogens	Phencyclidine	Alcohol	Stimulants	Depressants	Opiates	Hallucinogens	Phencyclidine
Coryza		●		●												
Delirium	●		●		●	●	●			●	●	●	●	●	●	●
Depressed mood	●	●			●		●			●						
Diarrhea				●	●							●				
Diplopia					●		●									
Dizziness					●	●	●		●	●					●	
Dysmetria					●		●			●						
Euphoria					●	●	●	●	●	●						
Facial grimacing										●		●				
Fatigue	●	●					●									
Floating feeling					●		●	●	●	●						
Flushing	●		●		●			●	●			●			●	
Hallucinations	●		●			●			●	●		●			●	●
Headaches			●									●				
Hyperphagia		●														
Hypertension				●		●			●	●		●			●	●
Hyperthermia						●			●			●			●	

Table 11. Drug Signs and Symptoms—Continued

Signs and Symptoms	Withdrawal				Intoxication						Overdose					
	Alcohol	Stimulants	Depressants	Opiates	Alcohol	Stimulants	Depressants	Opiates	Hallucinogens	Phencyclidine	Alcohol	Stimulants	Depressants	Opiates	Hallucinogens	Phencyclidine
Hypotonia		●					●	●					●	●		
Irritability	●		●	●	●	●	●			●		●	●		●	
Lacrimation				●												
Memory poor	●				●		●			●						
Motor seizures (grand mal)	●		●									●			●	●
Mouth dry					●	●						●			●	
Muscle spasms (rigidity)				●						●						●
Nausea			●	●	●	●			●	●		●			●	●
Nystagmus	●						●			●			●			●
Orthostatic hypotension	●		●				●						●	●		
Paresthesia	●		●			●			●			●				
Piloerection (gooseflesh)				●												
Psychosis (toxic)	●		●		●		●			●		●			●	●
Pupils dilated				●		●			●			●			●	
Pupils pinpointed								●						●		
Reflexes hyperactive	●		●			●			●	●		●			●	
Respiration slow and shallow											●		●	●		

Table 11. Drug Signs and Symptoms—Continued

Signs and Symptoms	Withdrawal				Intoxication						Overdose					
	Alcohol	Stimulants	Depressants	Opiates	Alcohol	Stimulants	Depressants	Opiates	Hallucinogens	Phencyclidine	Alcohol	Stimulants	Depressants	Opiates	Hallucinogens	Phencyclidine
Restlessness	●			●		●			●	●						
Rhinorrhea		●		●												
Skin picking						●		●				●				
Sleep disturbance	●	●	●	●	●	●			●			●				
Sleepiness		●			●		●	●								
Speech slurred					●		●			●						
Stare blank										●						●
Suspiciousness					●	●			●	●		●			●	●
Sweating	●			●								●				
Tachycardia	●		●	●		●			●	●	●	●			●	●
Talkativeness					●	●						●				
Tremor	●		●			●			●			●			●	
Violence					●		●			●						●
Vomiting	●			●	●					●		●			●	
Yawning				●			●									

Annotated List of Curriculum Material

This annotated list of curriculum material is not intended to be comprehensive or even adequate for the psychiatry faculty member who is teaching about substance use disorders to medical students. It is merely material that has proved to be useful to the author and his students.

Part 1
Instructional Books on Teaching Techniques

FOLEY, R. P., and SMILANSKY, J. *Teaching Techniques: A Handbook for Health Professionals.* New York: McGraw-Hill Book Co., 1980. 171 pp. Offers excellent advice on how to prepare the introduction, content, and summary of a lecture, as well as how to take full advantage of the use of questions, group discussions, and clinical problem solving. Contains some useful self-rating tables.

MAGER, R. F. *Developing Attitudes Toward Learning.* Belmont, CA: Fearon-Pitman Pub., 1968. 104 pp. Shows the teacher how to recognize negative or positive student behavior toward the subject being taught. The presentation centers on approaches to initiating positive reactions after student contact with the subject.

MAGER, R. F. *Measuring Instructional Intent.* Belmont, CA: Fearon-Pitman Pub., 1973. 159 pp. Gives guidelines on devising test items that measure the intent of your teaching goals. Thus, the teacher learns how to determine if his instruction is successful.

MAGER, R. F. *Goal Analysis.* Belmont, CA: Fearon-Pitman Pub., 1975. 136 pp. Very useful for all teachers, it outlines a practical approach on how to develop and define teaching goals. As in most of the Mager books, practical examples are detailed with common sense approaches. The Mager books are invaluable in planning and evaluating specific education goals in substance abuse.

MAGER, R. F. *Preparing Instructional Objectives.* Belmont, CA: Fearon-Pitman Pub., 1975. 136 pp. Helps the reader to determine if there is a reason for teaching a subject and, if so, to ascertain what your students do not already know about the subject. This book then prepares the reader to identify the important material to be taught and to develop original teaching objectives.

WOOD, L., and DAVIS, B. G. *Designing and Evaluating Higher Education Curricula.* Available through the ERIC Clearinghouse, Washington, D.C.: George Washington University. Offers a systematic approach to curriculum design and evaluation. This small book attempts to identify the available research methodologies in relation to designing and evaluating curricula. Case studies are used to illustrate the techniques at the higher educational level.

Part 2
Books, Articles, and Monographs on Substance Abuse Course Outlines and Content

CHAPPEL, J. N. *Human Behavior II.* Reno: University of Nevada School of Medicine. 75 pp. Available from the author. Outlines the goals for enabling the student to understand and describe chemical dependency in the following areas: narcotics, CNS depressants including alcohol, CNS stimulants, hallucinogens, and volatile hydrocarbons. Also details the goal of developing positive attitudes in medical students toward substance abusers, and outlines the medical management for overdose, withdrawal, short- and long-term treatment, and prevention. It includes the STAK (Standardized Test of Attitude and Knowledge in Substance Abuse). This well-organized guide contains 48 recommended articles on substance abuse.

DAVIS, D. I., Chairperson. Physician Education in Substance Abuse: Curriculum Objectives. In: Galanter, M., ed. *Alcohol and Drug Education in Medical Education.* Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1980. pp. 27–33. Outlines the curriculum objectives for medical education in substance abuse including epidemiology, genetics, basic sciences, sociocultural factors, psychological factors, diagnosis and treatment of overdose and withdrawal stage, diagnosis and treatment of intoxication, legal aspects, and prevention.

GRIFFIN, J. *Substance Abuse Curriculum.* Department of Psychiatry, Emory University School of Medicine, Georgia Mental Health Institute, Room 166A, 1256 Briarcliff Rd., NE., Atlanta, GA 30306. Available from the author. Outlines and details objectives of a course on substance abuse. Guide contains course lecture notes, articles concerning research and treatment of alcohol and drug abuse, and student evaluation procedures. Objectives include developing positive attitudes of physicians toward patients, diagnoses, treatment, followup therapy, and prevention.

HOSTETLER, J. R. *Drug/Alcohol Abuse Module.* Ohio State University, Department of Preventive Medicine, 410 West 10th Ave., Columbus, OH 43201. 180 pp. Available from the author. This module includes objectives and reading resources for an independent study of alcoholism and other drugs of abuse. It is based on the substance abuse objectives developed by the Career Teachers in Substance Abuse, funded by NIAAA and NIDA.

KNOTT, D. H., and DAVIS, T. *Development and Evaluation of Alcohol and Drug Abuse Curriculum for Medical Students.* Memphis: University of Tennessee Medical School. 26 pp., plus STAK. Available from the author. Outlines the problems of standardized diagnostic criteria, confusion about the appropriate directions for treatment of substance abuse, and lack of adequate goals. The outline then lists an essential core curriculum with specific overall objectives. Very thoughtful monograph.

KRUG, R. S. *Preclinical Curriculum in Substance Abuse.* University of Oklahoma Health Sciences Center, P.O. Box 26901, 800 Northeast 13th St., Oklahoma City, OK 73104. 36 pp. Available from the author. For first and second year students in substance abuse with 20 lecture class hours. Definition, etiology, diagnosis, and treatment of substance abuse are detailed with information on withdrawal and recovery process.

NATIONAL INSTITUTE ON DRUG ABUSE. *Substance Abuse Knowledge Survey for Medical Students and Physicians.* Single copies available free from the

National Clearinghouse for Alcohol Information (NCALI), P.O. Box 2345, Rockville, MD 20852. One hundred multiple choice questions that adequately survey the student's knowledge of substance abuse. Results can be compared with other medical schools.

NATIONAL INSTITUTE ON DRUG ABUSE and NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM. *Alcohol and Drug Abuse in Medical Education*, Galanter, M., ed. Washington, DC: Supt. of Docs., U.S. Govt. Print. Off., 1980. 131 pp. This monograph reviews the teaching of alcohol and drug abuse in U.S. medical schools and contains recommended curriculum material for course outlines and evaluation techniques. It also contains proceedings of the National Conference on Medical Education in Alcohol and Drug Abuse, 1977.

NATIONAL INSTITUTE ON DRUG ABUSE and NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM. *Substance Abuse Resource and Curriculum Guides for Physician Assistants and Nurse Practitioners.* 139 pp. Single copies available free from the National Clearinghouse for Alcohol Information (NCALI), P.O. Box 2345, Rockville, MD 20852. Although intended for physician assistants and nurse practitioners, this well-organized 139-page curriculum guide provides a valuable resource for information on detection, management, and prevention of substance abuse.

SOLOMON, J.; POKORNY, A.; and ZIMBERG, S. *Alcoholism and Drug Abuse Training During Psychiatry Residency.* Available from Downstate Medical Center, Career Teacher Center, 450 Clarkson Ave., Box 32, Brooklyn, NY 11203. 19 pp. Although this outline is intended for the faculty and the teaching residents, it contains some very useful information that can be incorporated into medical student teaching. Final comments on curriculum objectives are included as an appendix.

WHITFIELD, C. I. Medical Education and Alcoholism. *Maryland State Medical Journal* 29(10):77–83, 1980. Brief review of past problems in teaching substance abuse at medical schools and description of present curriculum at Maryland. Emphasizes the importance of exposing medical students to successfully recovered patients early in the curriculum, preferably in the freshman year.

Part 3
Resource Material on Substance Abuse Problems of Women and Minority Groups

The following material has been found to be practical and useful for stimulation of small group discussions on substance abuse.

DAWKINS, M. P. Alcohol information on black Americans: Current status and future needs. *Journal on Alcohol and Drug Education* 25:28–40, 1980. The author reviews 26 articles on the topic, "Alcohol and Blacks," in an annotated bibliography that is quite useful for the teacher of substance abuse. The lack of information and research on the use of alcohol by black Americans is also described.

FINNEGAN, L. P., ed. *Drug Dependency in Pregnancy: Clinical Management of Mother and Child.* DHEW Pub. No. (ADM) 79–678. Rockville, Md. 1979. 109 pp. Excellent description of

prevalence of drug use in pregnancy with subsequent effects on mother and child. Clinical management of pregnancy, labor, delivery, and post-partal care is well detailed. The importance of continuing care of mother and child is emphasized. A compact book with a great deal of useful information. Excellent.

GLATT, N. M. Reflections on the treatment of alcoholic women. *British Journal on Alcoholism* 14:77–83, 1978. A review of 30 articles on alcoholic women, citing data that tends to reflect a greater intolerance by husbands for alcoholic wives (e.g., 10.5 percent divorced alcoholic males as against 23.5 percent divorced alcoholic women), suggesting this intolerance as a possible reflection of the prejudices of society. Very good review article.

GREELEY, A. M.; MCCREADY, W. C.; and THEISEN, G. *Ethnic Drinking Subcultures.* New York: J. F. Bergen Pub., 1980. 138 pp. The authors review the drinking behavior of the major ethnic groups in the United States. They define the drinking and drug usage subcultures and also examine the effects at attemped integration into the new society. The original cultural assimilation is examined and discussed in relation to the development of substance abuse. A book that is a good beginning for the relative void in the literature of ethnic substance abuse in the United States.

NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM. *Unseen Crisis: Blacks and Alcohol.* Single copy available free from the National Clearinghouse for Alcohol Information (NCALI), P.O. Box 2345, Rockville, MD 20852. Very well designed pamphlet initiated by NIAAA. The brochure contains data that shows that the incidence of alcoholism is increased by a combination of the following factors: poverty, movement from a rural area to a city, age under 25, residence in a city, product of a broken home. The association between these data and young city blacks is noted. A practical brochure that is good resource material for communities as well as a useful handout for patients and students.

SANDMAIER, M. *Alcohol Abuse and Women.* 25 pp. Single copies are available from the National Clearinghouse for Alcohol Information (NCALI), P.O. Box 2345, Rockville, MD 20852. Pamphlet briefly reviews the problem of alcoholism in women and describes some of the differences in male and female alcoholics. Different causes of stress, different self-images, and differences in drinking habits are explained by very typical case descriptions. A practical guide for patients and medical students.

SANDMAIER, M. *The Invisible Alcoholics.* New York: McGraw-Hill Book Co., 1981. 298 pp. The author reviews prejudicial attitudes toward the drinking woman, which began in ancient times and still persist. She reviews the scope of the problem, including transcribed interviews with alcoholic women from different environments: housewives, employed women, minority women, teenage girls, lesbians, and women on skid row. This book partially helps to compensate for the lack of adequate knowledge about one-third of the Nation's alcoholics. Good reference source for students.

Other source material for this section can be found in references cited in parts 2 and 4 of this list.

Part 4
Newsletters, Miscellaneous References, and Monographs

Newsletters

ALCOHOL AWARENESS SERVICE. National Clearinghouse for Alcohol Information (NCALI), P.O. Box 2345, Rockville, MD 20852. Published bimonthly. This service publishes brief summaries of current material from publications in the alcohol field.

THE ALCOHOLISM REPORT. JSL Reports, 1264 National Press Bldg., Washington, DC 20045. Published biweekly. A newsletter that summarizes the most recent Federal legislative and budgetary decisions on funding of alcoholism treatment and research. In most of these newsletter reports is a brief review of abstracts of the most recent articles that the editor believes to have some important or interesting data.

NIAAA INFORMATION AND FEATURE SERVICE. National Clearinghouse for Alcohol Information (NCALI), P.O. Box 2345, Rockville, MD 20852. Periodic news service that publishes articles on alcohol programs and research findings; also lists upcoming meetings.

THE PHARMCHEM NEWSLETTER. PharmChem Lab., 3925 Bohannon Dr., Menlo Park, CA 94125. Published bimonthly. Contains summaries of analyses of street drugs brought in by users, and serves to alert the public about the circulation of truly dangerous street drugs. In addition, many of the issues have an interesting article about some drug of abuse or addiction.

PROJECT CONNECTION—Best Strategies. Alcohol, Drug Abuse, and Mental Health Administration, 5600 Fishers Lane, Rockville, MD 20852. Describes successful approaches and practices of States and communities to improve communication between drug abuse treatment and the criminal justice systems.

Miscellaneous References

CRITERIA COMMITTEE, NCA. Criteria for the diagnosis of alcoholism. *Annals of Internal Medicine* 77: 249–258, 1972.

ALCOHOLICS ANONYMOUS. *Dr. Bob and the Good Oldtimers.* New York: AA World Services, 1980.

JOURNAL OF MEDICAL EDUCATION. American Medical College, One Dupont Cir., NW., Washington, DC 20436. Published monthly. A very useful journal for all medical educators.

SCHEDULE OF CONTROLLED SUBSTANCES. Contains the five schedules of controlled substances. Can be obtained from the local DEA agency. It is updated annually.

Monographs

COHEN, S., and GALLANT, D. M. *Diagnosis of Drug and Alcohol Abuse.* 1981. Medical Monograph Series. National Institute on Drug Abuse, National Clearinghouse for Drug Abuse Information, Room 10A–56, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857. 117 pp. Outlines the appropriate guidelines for a sensitive patient interview, a physical examination, and the diagnosis of alcohol and drug abuse. The medical complications of alcohol and drug abuse are outlined. There is also a chapter on helpful diagnostic tests and teaching tables, and a pretest and post-test evaluation for the student.

DUPONT, R. I.; GOLDSTEIN, A.; O'DONNELL, J.; and BROWN, B., eds. *Handbook on Drug Abuse.* 1979. National Institute on Drug Abuse, National Clearinghouse for Drug Abuse Information, Room 10A–56, Parklawn Building, 5600

Fishers Lane, Rockville, MD 20857. 452 pp. Reviews treatment modalities for narcotic addicts, drug treatment problems in specific populations (women, young people, and elderly), psychosocial evaluation of drug users, and epidemiological studies. The last chapter is titled "Drug Treatment in the Future."

INSTITUTE OF MEDICINE. *Sleeping Pills, Insomnia, and Medical Practice*. National Academy of Sciences Report. 1979. Reprinted by National Institute on Drug Abuse, National Clearinghouse for Drug Abuse, National Clearinghouse for Drug Abuse Information, Room 10A-56, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857. 46 pp. Contains chapters on epidemiology of sleep complaints and prescribing practices, public health problems associated with hypnotic use, research on insomnia, and an assessment of the hazards and benefits of hypnotic drugs.

JACOBSEN, G. R. *Diagnosis and Assessment of Alcohol Abuse and Alcoholism*. 1976. National Institute on Alcohol Abuse and Alcoholism, National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852. 37 pp. A review of diagnostic and assessment techniques that are specific for alcoholism. The specific questions addressed in the monograph are (1) What specific alcoholism measuring instruments exist? (2) What is known about the validity and reliability of these instruments? (3) What are the practical clinical applications? and (4) What measuring or testing gaps exist in the field of alcoholism?

LEWIS, D. C., and SENAY, E. *Treatment of Drugs and Alcohol Abuse*. 1981. Medical Monograph Series. National Institute on Drug Abuse, National Clearinghouse for Drug Abuse Information, Room 10A-56, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857. 112 pp. Contains sections on how to respond to common substance abuse emergencies, approach to the comatose patient, specific treatment for drug overdose and withdrawal, pharmacotherapy and sociotherapy of drug and alcohol abuse, and experimental treatment modalities. There is a pretest and post-test evaluation for the student.

PETERSEN, R. C. ed. *Marijuana Research Findings*. 1980. National Institute on Drug Abuse, Division of Research, 5600 Fishers Lane, Rockville, MD 20857. 225 pp. This excellent monograph describes health findings in relation to marijuana use, chemistry and metabolism, effects on memory and cognition, effects on endocrine metabolism, association between use and change in reproductive function, additive effects with other drugs, and potential therapeutic aspects of marijuana.

SOLOMON, J. *Guidelines for the Care of the Drug and Alcohol Abusing Patient*. 1977. Available from the author. Downstate Medical Center, Brooklyn, NY. 17 pp. Outlines the treatment of opiate overdoes, dependency, and withdrawal; CNS depressant intoxication, dependence, and withdrawal; alcohol intoxication and withdrawal; and stimulant intoxication.

THE WHOLE COLLEGE CATALOG ABOUT DRINKING. Reprinted in 1980. National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852. Reviews the current status of college attitudes and behavior associated with drinking. Addresses the problem of whether or not prevention may work at the college level. This monograph also presents basic facts on the metabolism and psychologic effects of alcohol. It offers helpful advice on program evaluation that assesses the value of prevention and treatment facilities on campus.

Part 5
Audiovisual Material

As with the first three parts of this section, it is impractical to adequately review even a majority of the available audiovisual material. For more detailed information in this area, *Alcohol and Drug Abuse Teaching Methodology Guide for Medical Faculty* by Jeptha Hostetler (in press), National Institute on Alcohol Abuse and Alcoholism, is an excellent resource as is a monthly publication *Projection* by the Toronto Addiction Research Foundation, 33 Russell St., Toronto, Ontario, Canada, M5S 251, which has a rating system for alcohol and drug abuse films and videotapes.

ALCOHOL AND DRUG ABUSE AMONG PHYSICIANS. ¾" U and ½" or VHS video cassettes, color. 52 minutes, but can be used in two separate 26-minute showings. Biomedical Communications Department, Tulane University School of Medicine, 1430 Tulane Ave., New Orleans, LA 70112. Purchase. Records candid interviews with two rehabilitated doctors and their wives about their personal experiences with alcohol and drug abuse. The interviews were conducted from an audience of 160 freshman medical students at Tulane Medical School. The doctors and their wives honestly reflect on past problems of substance abuse and difficulties in rehabilitation in relation to the family and their practice of medicine. In this unrehearsed interview, questions from the students add to the spontaneity of the film. The presentation warns medical students about the possible susceptibility to alcohol or drug dependence and encourages compassion for their colleagues, as well as patients, with drinking and drug problems.

DOCTOR, YOU'VE BEEN LIED TO, 16mm, 20 min. Ayerst Laboratories, 685 Third Ave., New York, NY 10017. Free loan; not available for purchase. Film actor Patrick O'Neal, a recovered alcoholic, with the help of interviews with physicians and alcoholic patients, offers guidelines on identifying and confronting the alcoholic patient. Information on the use of disulfiram (Antabuse) is given at the end of this film.

GALE IS DEAD. 16 mm, 44 min. British Broadcasting Corp., 135 Maitland St., Toronto, Canada. Purchase. A young girl has died from a heroin overdose. The film explores the series of events including school and institutional experiences that led to her death. A chaotic relationship with the patient's mother is part of the background. The fragmentation of her early life results in a sad commentary that prison provided the friendliest environment to her. Her final days as a heroin addict are revealed by interviews with her addict friends. The psychologic problems leading to heroin addiction and resulting from it are revealed by this historical approach to her background.

IDENTIFICATION OF THE ALCOHOLIC PATIENT. ¾" video cassette, 22 min. Department of Family Practice, University of Michigan School of Medicine, Ann Arbor, MI 48109. Using the student to portray a young alcoholic patient in the early phase of his illness, an interview is skillfully conducted to show a sensitive approach to the denial mechanism, enabling the patient to start taking an honest look at himself.

THE INTERVENTION. 16 mm, 27 min. Johnson Institute, 10700 Olsen Memorial Hwy., Minneapolis, MN 55441. Purchase. A well-acted film that portrays a desperate husband of an alcoholic who seeks professional help, which results in an intervention. The final confrontation with the female alcoholic takes place with her husband, son, daughter, son-in-law, concerned employer, and counselor. This confrontation meeting, which is the goal of the intervention, is a moving one: after very strong initial resistance with denial, the patient tearfully breaks down and starts to accept her drinking problem.

THE NEONATAL ABSTINENCE SYNDROME: DIAGNOSIS. ¾" video cassette, color, 10 min. Career Teacher Center, Baylor College of Medicine, 1200 Moursund Ave., Houston, TX 77030. Purchase. An excellent teaching film demonstrating the signs and symptoms of the neonatal abstinence syndrome. The teaching techniques used are very good. Signs and symptoms are listed, followed by the filmed demonstration of the infants showing each of the signs and symptoms of the abstinence syndrome. Impressive.

THE NEONATAL ABSTINENCE SYNDROME: MANAGEMENT OF THE ACUTE PHASE OF COMPLICATIONS. ¾" video cassette, color, 12 min. Career Teacher Center, Baylor College of Medicine, 1200 Moursund Ave., Houston, TX 77030. Purchase. Using the same teaching techniques described in the previous video cassette, a medication and treatment regimen is outlined. Recognition and treatment of complications are detailed. Anotner impressive film.

THE SECRET LOVE OF SANDRA BLAIN. 16 mm, 27 min. Southerby Productions, Inc., Enterprises, P.O. Box 15403, Long Beach, CA 90815. Rental or purchase. Portrays a middle class housewife who is able to hide her drinking until it becomes obvious to family and friends. Denial on the part of her husband, as well as the patient, interferes with therapy. Finally, the alcoholism becomes so severe that the denial mechanism no longer helps the patient to deceive herself or her friends and family.

THREE TRIGGER FILMS. Trigger films set a scene within a brief period of time that should provoke an interesting educational class discussion. These films are not intended for large teaching classes. All three of the following trigger films can be purchased from the Addiction Research Foundation, 33 Russell St., Toronto, Canada. A printed outline of teaching objectives is enclosed with each film.

BEFORE AND AFTER. ¾" video cassette, 3 min., 10 sec. Two couples discover that they have difficulty communicating with each other and feel very uneasy without alcohol or cigarette props. A discussion of the use of social drugs to aid communication should be provoked by this film.

CHEERS. ¾" video cassette, 4 min., 20 sec. Scenes of teenage drinking in a park, a laundromat, and at home. Stimulates discussion about role models, parental attitudes, and teenage behavior.

SCHOOL DAYS. ¾" video cassette, 2 min., 20 sec. A failure in school discipline in relation to a suspicious gathering of students in the hallway is portrayed. A brief but stimulating trigger film that usually results in many varied responses regarding what the students were actually doing and why the teacher's discipline failed.

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